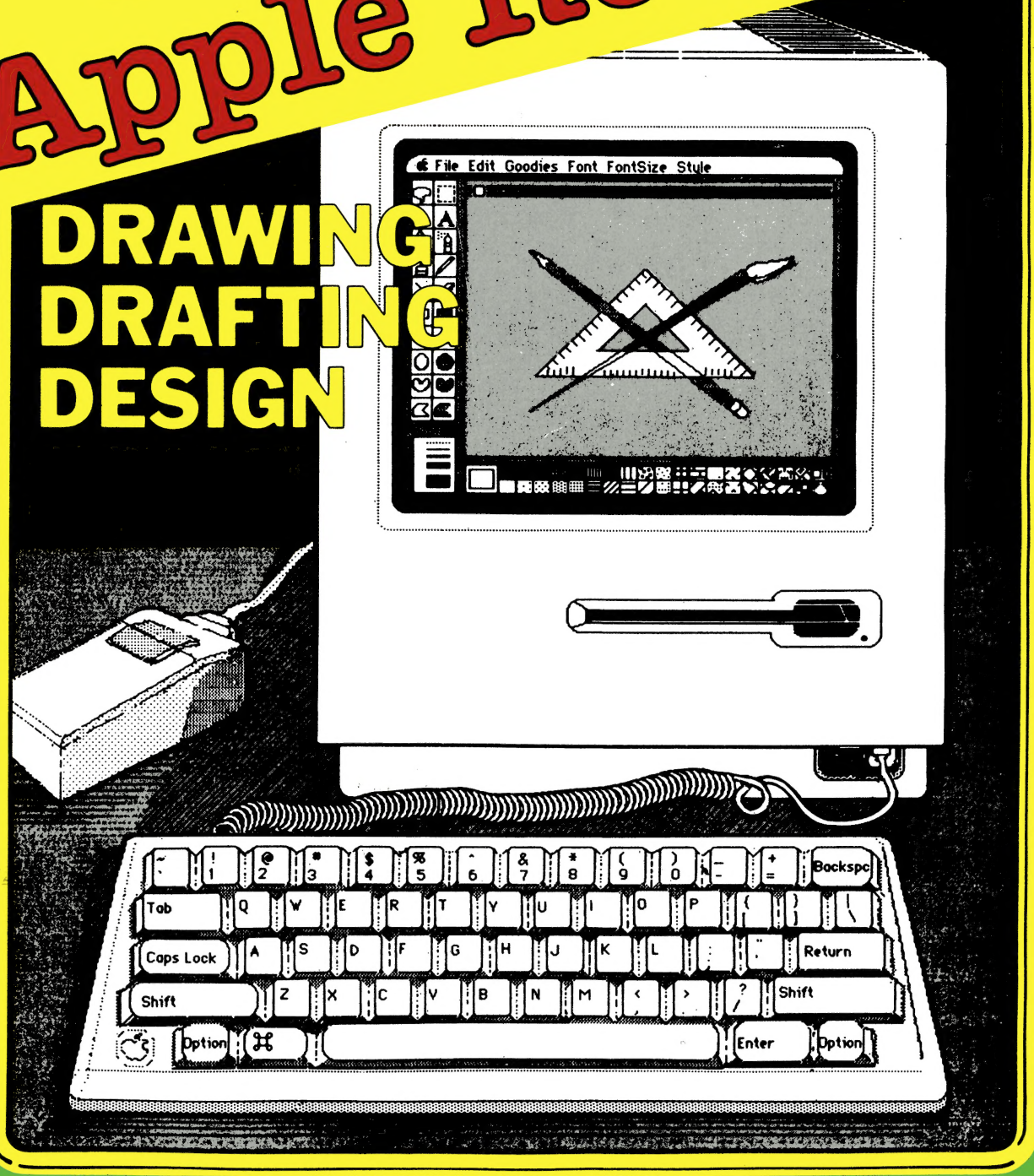
The Independent Magazine

April/May Vol 2 No 3 *$3

The Australian Apple Review

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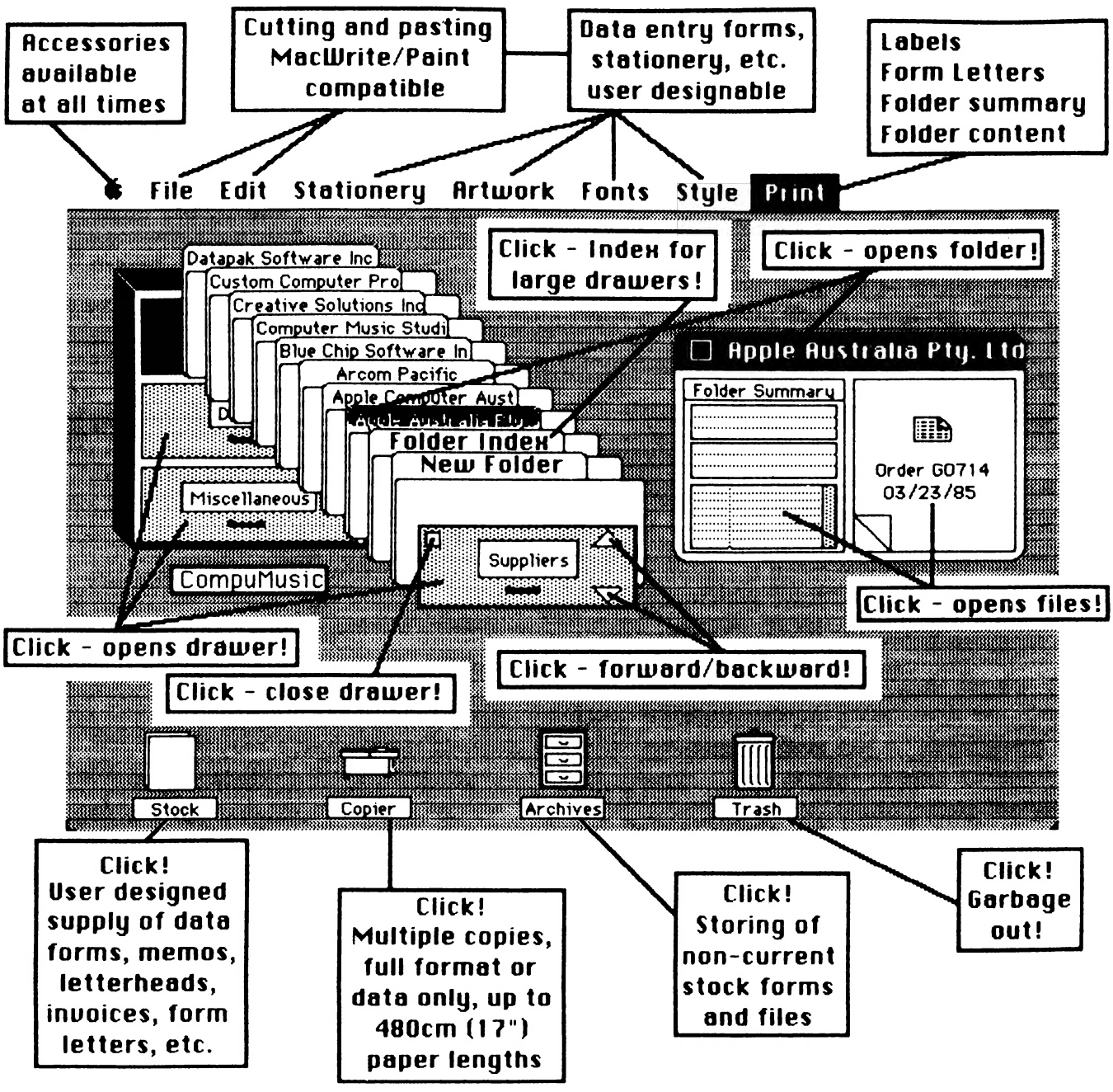


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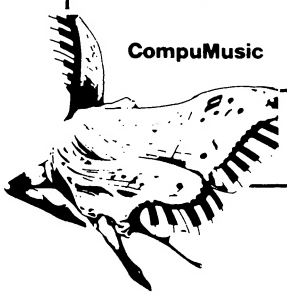
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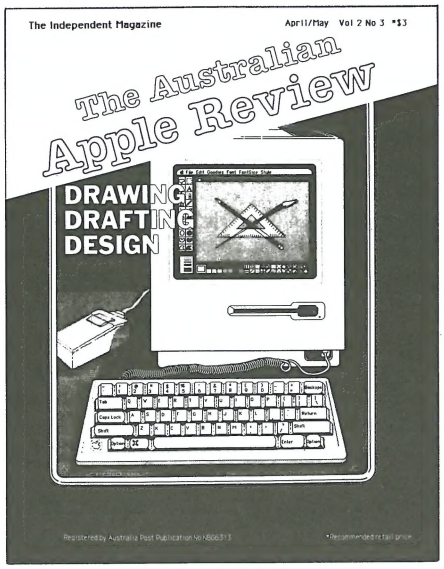


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The Australian Apple Review

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The Australian Apple Review
Top rear, 4 Carrington Road,
Randwick 2031, NSW
Phone (02) 398-5111

Published by
Gareth Powell Pty. Ltd.

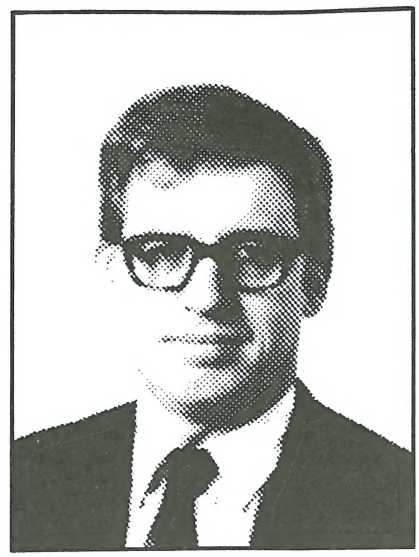
Editor: Gene Stephan
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Advertising:
Address all enquiries to
Gareth Powell Pty. Ltd.
(02) 398 5111.
Distribution:
NETWORK, Sydney.

Printed by:
Ian Lidell Printing Company.

Editorial



Gene Stephan is finding the editorial chair comfortable and I think the last issue, which was the first he was totally responsible for, was much better than any issue I have ever produced.

As, at the moment, he is effectively at school learning how to use a monster computer at the 'Sydney Morning Herald' I have managed to get at least a small amount of my own copy into the magazine.

The biggest news in this issue is that all of the typesetting has been done on the new LaserWriter printer. It is possible that you might observe a deterioration in some of the headlines. And it is possible that you may consider the pages not as felicitously laid out as normal. And you may find a few more errors then you are used to. For which we apologise.

But this is the start of a grand new era. A time when all publishers like myself will be able to produce magazines in-house with the minimum of fuss.

By the time the next issue comes around we will have got our act sorted out and you will see how a computer produced magazine can be acceptable at the highest levels of production.

For the moment we ask for your forbearance - we are still experimenting.

We do not normally list outside credits in this magazine. Too many people are involved.

But for just this once we think we ought to have a Roll of Honour for those who went out of their way to help, aid and offer moral support.

David Strong, for letting us use his LaserWriter when they are slightly rarer than hen's teeth.

David Roman, for active encouragement and support.

David Dobbin for tellings us that it could be done and showing us how.

The young and lovely Deborah O'Hara of Apple in Hongkong who helped set up the communications network.

Peter Sandys for setting up our type fonts.

Greg Lister and Peter Strickland of 'Software Source' for lending us 'MacPublisher'.

Chris Howells and Tim Kitto of NettComm for sorting out our modems and seeing that our communications between computers in different countries went without a hitch.

Mike Bolam for helping us when we transgressed from the way of truth and honesty.

Without the efforts of all of these lovely people this project would never have flown.

Our grateful thanks.

Gareth Powell.

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News



IIx?

The most exciting rumour of all to ever come from the US has to be about the Apple IIx - the machine that dreams are made of for all II series users. Basically, the Apple IIs have the eight bit 6502 processor which though we love dearly, is slow, can only access 64K RAM (unless you bank switch and even then it's still only 64K that is being addressed) and, if we believe all that is written in the papers, is vastly inferior to the magical 16 bit processors.

If it's only on the basis of addressable memory, then having a meg to play with on board is a highly appealing prospect. But 16 bits, all things being equal, goes further in its capabilities for more precise mathematics and faster processing speed.

Enter the 65802.

The 65802 is a 16 bit CMOS (complementary metal-oxide semiconductor) microprocessor which is meant to be pin and software compatible with the 6502 when in 8 bit emulation mode. But toggle a single processor flag and the Apple IIx becomes a true 16 bit machine.

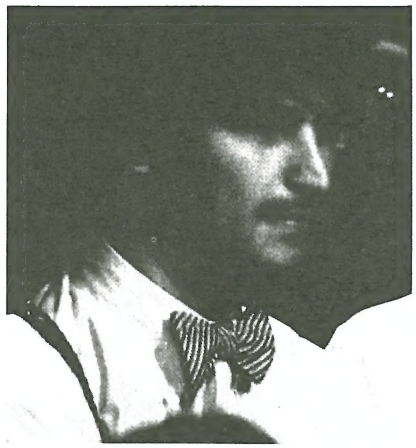
What a rumour.

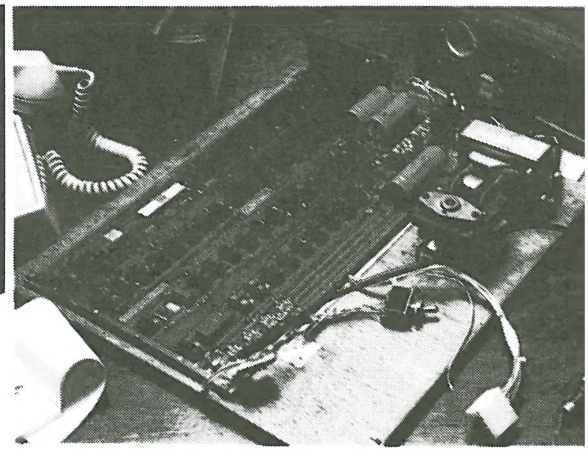
But will it eventuate?

The Woz talking about 'APPLE VERSUS IBM', just before leaving Apple said, "Apple has never really supported the Apple II in the business market. If you walk around a trade show and look at the software running on the IBM PC, you'll see that most of it is a step above what's possible on today's Apple II. They have more RAM that's easily addressed and better access to hard disk drives. Programs like Lotus1-2-3 cannot be easily implemented on a 128K Apple II, but IBM has a capable machine for that level of software.

"Our machine has to be able to address more memory equivalent software because IBM beats us in capability today. We need better screen resolution, more memory and better speed. A 16 bit processor would help, although '16 bit' really doesn't mean that much. Whatever we do will be compatible because WE DON'T WANT TO ALIENATE OUR EXISTING CUSTOMER BASE."

However, the Woz has gone.





LEFT Steve Jobs, Chairman of the Board of Apple Computer. RIGHT An Apple I. Not too many around these days as only about 200 were made.

***

Heard around the Computer Show....

While walking around the PC Show at Centerpoint, I was jerked back to the reality of how unglamorous computers can be if someone really tries.

For example, the sales person/demonstrator at the SRA stand tried booting an IBM disk in an Apple drive - unsuccessfully I might add - and when I asked him finally if he had 'anything more exciting' than the program he was showing me, he confided that "basically, ALL computer programs are BORING".

Believe it or not, that's verbatim.

Next, McGraw-Hill. Asked why there were no Apple programs to be seen at their little stall, the reply was "not much of a market for it" - I walked away wondering if Andrew Farrell was thinking of leaving the Australian Commodore Review.

Then, the antiquated looking NEC offering. Standing around for 10 minutes and appearing expectant did not arouse one person to come and try to ply the wares. Must be more worried about how the fridges are doing this year than caring about computers.

However, the prize must go to the

slightly green, but I must admit, very helpful youth at the Seiko stand. He informed me that the Seiko has 256 K RMO. But not only that. It has RMA as well. An unique and unusual machine whose day has not yet come.

And finally, the most charming comment from a lady who was showing us Archive's Pivot II - IBM compatible, portable and a fine machine too, "Why do you press never wear your press badges where we can see them!" (said laughingly).

Perhaps the best story from the show - and which is almost certainly untrue - concerns the man who approached the Apple stand and asked where the gent's lavatories were situated. The answer was, "Congratulations, sir. You have just won a Macintosh computer."

When the man carefully explained that all he wanted to do was attend to a pressing call of nature he was reassured he had, indeed, won a Macintosh computer. Because he was the first genuine enquiry they had received since the show opened.

Piracy or protection Money

I was slightly disturbed at seeing the latest piece of advertising for PROLOCK. For those unfamiliar with the system, a program is sold with two disks (at least), one of which is the 'Prolock' disk and the other the program disk. The Prolock disk serves two purposes. Firstly, it occupies one of your disk drives thereby causing the software to be recommended used with hard disk. Secondly, it is a means of copy protection, as the main program constantly checks for the authentic Prolock disk to be in the system.

(Worth noting that when the American distributor arrived in Australia he big-noted to everyone how secure his system was and generally behaved like a Parramatta used car salesman trying desperately to reach his sales target in the last week of the month. His good humour was not helped when three broken copies of his program were delivered to his hotel room five days after his arrival. With new locks placed on that he could not break.)

I believe that you get nothing for noth-ing, and I am anti-piracy without being ridiculous about it.

However, the Prolock disks are now themselves being copied - an outright act of piracy which has been met by Prolock stating that they have written routines which will speed up drives running illicit copies to the point where the drives will be burnt out.

Have you ever blown a disk?

I have, often.

My first action is to make sure that the disk had gone. My second action is to attempt to salvage as much data as was possible. Would this corrupt original appear illegal to Prolock while you - unsuspectingly - are working with it?

Will Prolock REPLACE ANY drive so damaged?

Unfortunately Prolock have answered neither question, so perhaps it's better to be safe and find another database or word processor which does not carry so many potentially dangerous shackles. If a program use Prolock my strong recommendation is that you do not buy it. If the manufacturer of the system is so devoid of the milk of human kindness I want nothing to do with him. Neither should you.

Fitting in a Bit More

If you look inside a II+ at the area marked RAM, you will find that your 48K is achieved with 24 chips - that's 2K a piece. If you open your IIe, you'll now see 64K in 8 chips - 8K a piece. News in from Japan is that Mitsubishi Electric has just made a one megabit chip. No wonder that most Japanese wear glasses - the width of the lines used in these ICs range from one to three microns, with 0.4 microns having been achieved. Incident-ally, a micron is one millionth of a meter, and the wavelengths of visible light range from around 0.35 microns (violet/ blue) up to 0.75 microns (red).

However, before anyone gets too excited, know that in Ottawa, Canada, the redoubtable Dr Szabo is now working on a chip that will hold one gigabit using laser techniques which split the spectrum down to 16,400,000 shades. Put 24 of these in an Apple and you will have 24 gigabits. It does not benefit the human mind to dwell on these possibilities for too long.

Imagine That

Imagineering are off again searching for new markets. This time it's Hongkong where Imagineering are planning to sell ORIGINAL software.

As Hongkong has a cavalier attitude towards the copyright issue on both machines and programs - the police have been happily using fake Apples and the Telephone company use stolen copies of Xtalk - then it might well be that Imagineering will find their task a little more difficult than they imagine.

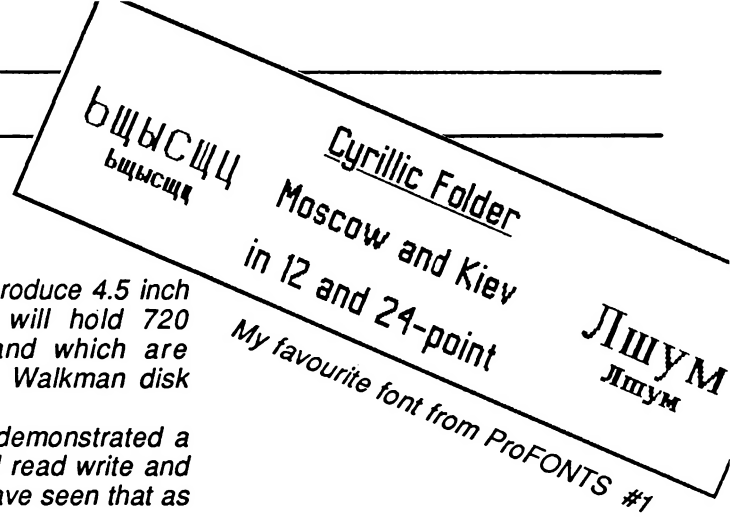
Worth noting that Dick Smith started up there and folded in six months. As far as I know, the three attempts to get Tandy up and flying have failed. On the other hand as Hongkong approaches 1997 it becomes a touch more respectable.

Who knows?

All we can do is wish Imagineering the best of British luck. Our Hong-kong associated magazine will no doubt keep us informed as to the state of play.

Falling Apples

There have been two setbacks in the past month for Apple Computer.



The first was the cancellation of the largest single Apple order by the French government. The second has been the slowing of the microcomputer market leading to 5 day closures of Apple works in California, Texas and Ireland in order to clear mounting stocks.

Does this mean that overall sales are down? Yes, but still up on sales for the previous year.

In Australia, the extent of the rise is in the order of threefold. Amazing stuff when other computer sales have slumped so badly.

Laser Disks into the Future

Have you noticed how some of the hi-tech advances that we were on the brink of only a matter of months ago have slipped into the future - or that little is being said about them?

It would seem that in the case of the laser disks, perfection is needed before they can be unleashed on the public. In the past the term 'perfection' has not been synonymous with releases of computer products, so why should things be different with optical storage?

I don't think it could be anything to do with the fact that 50-70 meg will cost around $5-10.

Especially, as Eastman Kodak have just taken over Verbatim (they do say that optical media will also be produced).

'Vested interests'?

No, no, no, no.

Publisher's note. If I did not have first hand evidence of the editor's upright moral character I would presume he had been indulging in illegal substances. The facts are simple.

1. Optical laser disks have been widely available for over a year from Shugart (now Japanese owned) and provide one gigabyte of memory on an 11 inch disk. I have used one extensively.

2. Philips and Sony have signed a joint agreement to produce 4.5 inch laser disks which will hold 720 megabytes each and which are based on the Sony Walkman disk player.

3. Toshiba have demonstrated a laser disk which will read write and erase. And, yes, I have seen that as well.

4. The main marketing push for laser disks will start next month in the United States.. They are already available. But buyers have been put off by the lack of an erase facility.

5. If the editor thinks that commercial pressure from a few hard disk companies will stop the Japanese giants from rolling into action he needs to think again - very carefully.

Laser disks are already here. As in Australia. Now they are a trickle. By the end of the year they will be a stream. Next year they will be a deluge.

Plainly the editor does not read the pages I write in the 'Sydney Morning Herald'. Probably too immersed in translating Pravda. - G. Powell.

Sounding Off

Ken Gunter of Compumusic is quite a remarkable fellow. I paid him a visit to match a face with a voice and was treated to some 'music'. A veritable Jekyll and Hyde, Ken will talk CP/M, dBase, WS, UNIX etc while there are Macs or IIs around. However, the cigarette droops, the eyes glaze and the fingers begin to twitch when he finds himself in the immediate proximity of a keyboard. He is, in fact, a professional musician of immense talent and ability who has found himself in the computer business by way of music synth-esisers. Hence the strange name of his company which will soon be changed.

After the music came the computers - good news and bad news.

On the good side, MYOFFICE is beginning to sell well, and two new titles are due in the next 4-10 weeks - MYACCOUNTANT and MYOFFICE EXECUTIVE. The retail prices of these programs will be at about the same level as MYOFFICE and they will be 'Australianised'. If you are interested, the COMPUMUSIC advertisement is on the inside cover of Australian Apple Review and Ken is there to answer the queries.

Other good news is that Compumusic are exporting a local Mac product to the States. PROFONTS was developed at the University of Tasmania's Department of Informational Sciences and retails at under $50.

We hope to have this reviewed in the next issue of Australian Apple Review.

On the not-so-hot side, Apple Computer (Australia) have chosen to endorse a Mac C compiler distributed by Imagineering rather than the Mac AZTEC C distributed by Compumusic. Ken tells me that in the United States Apple used AZTEC C to write the Mac peripheral drivers. Other companies registered to use AZTEC include :

LOTUS for JAZZ
ASHTON-TATE for dBase III
PFS
SPINNAKER
and LOCKHEED for their aviation applications.

AZTEC C for the Mac is due for review in a few issues time and if it is possible we will do this review in the form of a comparison with the Imagineering program.

Those who already have AZTEC C, check with Ken as he tells me he has just picked up quite a few public domain programs that have been written with this compiler.



Joe Mancini (far right) explaining the manuals to the Minister of Agriculture,(centre) and Mr Alf Gates of the RAS (centre left).

An Apple Apple at the Easter Show

Most Australians know of the Sydney Royal Easter Show but what they perhaps do not know is that this year for the first time, agricultural software was judged along with the more traditional items such as tractors, cows and produce.

The winning entry, and very deservedly so, was LANDFORM devel-oped by Joe Mancini originally on an Apple II+ using Apple PASCAL but now available on a variety of systems.

Joe describes LANDFORM as "a mathematical modelling package which fits plane or curved surfaces to a set of grid levels representing a surveyed area of land. The cut/fill details and costs of any chosen model are displayed and printed, and this allows the effective practical implementation of the surface by earthmoving equipment."

"I first saw the need for such a program when investigating the operations of Irrigation surveyors in the Riverina. These people were still performing man-ual trial and error calculations - a long and tedious task which precludes the analy-sis of a variety of different models."

"The only software available allowed the application on plane surfaces. This still meant that curved surfaces had to be modelled manually. However, allowing the application of curved or warped surfaces is very important as thus cut vol-umes are reduced and so the model is less costly to implement.

"Australian topsoil is generally very shallow and minimizing the cut is critical if crops are to grow without the application of fertilizer."

"I developed LANDFORM on an Apple II+ computer in 1980, and have had sales as far from Australia as Mozambique and Iran. Recognition in Australia has not been speedy however as my work for Matthew Hall Engineering takes precedence. I modified the pro-gram and converted it to MS-DOS format in 1984, and am extremely delighted with the response I received at this year's Royal Easter Show."

For first prize, Joe was presented with an HP 110 lap computer, $1500 of IBM software, $1000 cash and an expenses paid trip for two to the Melbourne PC show.

On the future Joe says, "I started with Apple and I guess we are never going to go too far from the machine. I am now developing a package which hopefully will be available for the //c in the next month or so."

Further information or a demo disk and user manual for $15 are available from Practical Solutions on (02)260-1664.

Softcentre
P.O. Box 233, Woollahra. 2025.
(02)389-9767

VERBATIM DATALIFE DISKS

ssdd....$35
dsdd....$47
100s storage boxes (lockup)....$35
POSTAGE PAID

Derrière Firmer

Place hands on chair, feet flat on the floor, and lift your hips and buttocks up. Tighten your buttocks. Hold for five seconds, then sit back and relax. Repeat twice. Benefit – to firm and tone your legs and buttocks.



TONE UP AT THE
TERMINALS

Puzzle Page

There were an extraordinary number of replies to the Jan/February puzzle. Because of this we decided that the winning entry would still be drawn at random but that three runners-up would be chosen by program.

The winner of the very popular book 'Inside the Apple IIe' courtesy of Prentice-Hall, was Ian Jones of Dover Heights, NSW. The runners-up, will each receive a copy of 'How to Win at Home Video Games' from Beagle Computer Services.

Ian approached the problem in the same way as most of the entries, and his Apple came up with the correct number - 938. His program is Program 1.

The three runners up were Roger Geddes of Holbrook, NSW (Program 2.), Steve Tattersall of Seacliff, SA (Program 3.) and J. Dunn of NSW (Program 4.).

These were selected (after the main draw) for their originality. I wont say more and will leave you to look at their code for yourselves.

```
10  REM  ***** LIKE A BOOK *****
20  REM                FEB 85
30  REM
40  REM  IAN JONES
50  REM  2 RODNEY ST
60  REM  DOVER HEIGHTS
70  REM  NSW 2030
80  REM  PHONE 371 5991
90  REM
100 REM  ** LISTING AS FOLLOWS: **
110 REM
120 FOR I = 1 TO 1147
130 R1 = 1147 - ( INT (1147 / I) * I)
140 R2 = 3023 - ( INT (3023 / I) * I)
150 R3 = 5837 - ( INT (5837 / I) * I)
160 R4 = 8651 - ( INT (8651 / I) * I)
170 IF R1 = R2 AND R2 = R3 AND R3 = R4 THEN N =
180 NEXT
190 PRINT "THE HIGHEST NUMBER IS ";N
200 END
210 REM
220 REM  ** THE ANSWER IS 938 **
```

```
#define NUM1    1147
#define NUM2    3023
#define NUM3    5837
#define NUM4    8651

main()
{

int     remainder,divisor,true;

        divisor = NUM1-1;
        true = 0;
        do
        {
                remainder = (NUM4 % divisor);
                if ((NUM3 % divisor) == remainder)
                        { if ((NUM2 % divisor) == remainder)
                                { if ((NUM1 % divisor) == remainder)
                                    true = 1;
                                }
                        }
                if (true != 1) divisor--;
        }
        while (true != 1);
        printf("The divisor is %4d with remainder %4d.",divisor,remainder);
        true = getchar();
}

/* This routine is not amazing but it does give the following result
   divisor = 938 ; remainder = 209

   I wrote this in 'C' as it is quite quick and I like the language.
   The largest divisor is guaranteed , as the first divisor is 1146 (smallest
   number - 1) and is decremented when no suitable answer is found */
```

```
]
SCR # 124
  0
  1 : DATA 8651 5837 3023 1147 ;
  2
  3 : COMPARE OVER = IF ELSE -1 * LEAVE
  4                  THEN ;
  5 : REMAINDER 0 4 0 DO 6 I - PICK
  6       3 PICK MOD I
  7       IF COMPARE
  8       ELSE SWAP DROP
  9       THEN LOOP SWAP DROP ;
 10 : BINGO ." BINGO! THE NUMBER IS " .
 11       DROP DROP DROP DROP ;
 12 : AAP-COMP DATA 1 OVER
 13       DO I REMAINDER 0 >
 14          IF I BINGO LEAVE
 15          THEN -1
 16       +LOOP ;
 17
 18              AAP-COMP
 19
 20
 21
 22
 23

BINGO! THE NUMBER IS 938
```

Puzzle 3.

Amazing as it may be, I occasionally use a calculator. Imagine the surprise when multiplying 87 by 21 I saw the answer 1827. The numbers were the same but the order had changed. This had me scratching, wondering how many other two digit numbers which when multiplied together gave a quotient made up of themselves. What could they be, thought I? Certainly the answer is only a few lines of code away.

I would like to thank those who participated and wish you all luck with the new 'Win a Book'.

Deadline on this is June 5, 1985.

```
]LIST

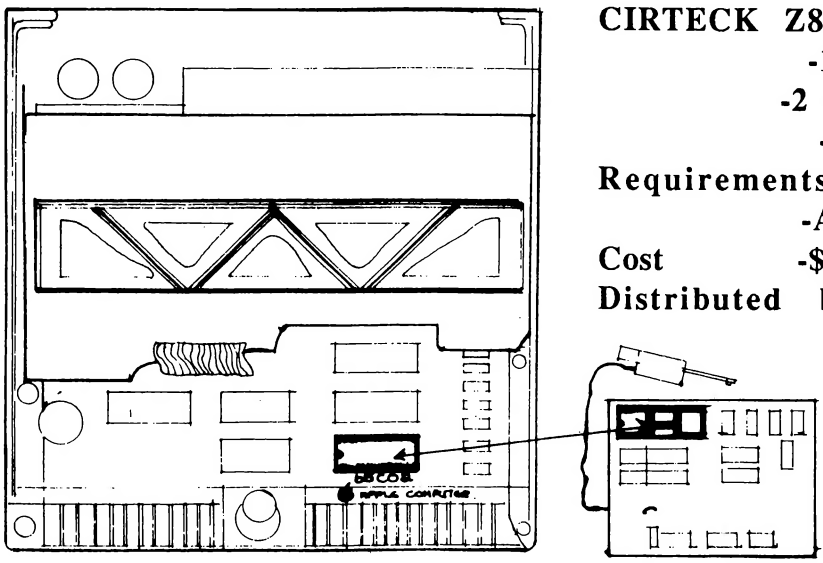
10  DATA  5837,3023,8651,1147
15  REM  - FIND LOWEST NUMBER IN THE DATATO SET MAXIMUM DIVISOR RAN
20 MINI = 9999
30  FOR I = 1 TO 4
40  READ NUMBER
50  IF NUMBER < MINI THEN MINI = NUMBER
60  NEXT I
65  PRINT MINI
70  DIM Y(4)
80  FOR J = MINI TO 2 STEP  - 1
85  RESTORE
90  FOR K = 1 TO 4
100  READ NUMBER
105  REM  - CALCULATE EACH REMAINDER AND STORE
110 Y(K) =  INT ((NUMBER / J -  INT (NUMBER / J)) * J + .000001)
130  NEXT K
140  IF Y(1) <  > Y(2) GOTO 150
141  IF Y(1) <  > Y(3) GOTO 150
142  IF Y(1) = Y(4) GOTO 200
150  NEXT J
200  PRINT "MAXIMUM DIVISOR = ";J
201  PRINT "REMAINDER       = ";Y(1)
210  END


]RUN
1147

MAXIMUM DIVISOR = 938
REMAINDER       = 209
```

IIc or not IIc

by Gene Stephan



CIRTECK Z80 I/F for //c
-1 interface board
-2 disks
-1 instruction leaflet
Requirements
-An Apple //c
Cost -$299
Distributed by Thinking Systems, (02)211-0944

I think the best way that I can start this article is to describe the setting as I write this review. I am sitting outside the house, under a tree with a drink by my side and an Apple //c on a folding table before me. To say that it is pleasant out here would be understating and in this good, relaxed mood, I am plugging away at WORDSTAR.

For the last 12 odd months that the //c has been around I have never had even the remotest inkling to work at one. The reason for this was that I was annoyed at Apple for saying that the II series would always be compatible and at the same time making the //e and then the //c progressively less compatible. Further, Apple publicize that they are pledged to supporting the huge // user base and then chose to ignore that sizable section of // users who have supported it through thick and thin - those loyal users who faithfully and unquestioningly plugged in their Z80 boards and took their Apples out of games and into serious applications.

It was a significant development that Apple allowed third party development of their bare bone //e units, but with the //c they have made even that difficult. Now however there are two hot new items to partially rectify what I consider to be Apple's mistake.

Local board

I will start with the local one first. APPLIX, a company working from Sydney's south eastern suburbs is expecting to complete the first production run of their 'black box' in mid April. Basically, they have approached the problem by building from scratch. The unit plugs into the printer port on the //c and pretends it is a printer buffer - by the way, you don't lose that valuable printer plug as the box provides an alternate one. Once plugged in, the box can be used as a printer buffer, or, if the specially written CP/M boot disk is booted, then the box communicates with the //c at something like 115K baud and gives you access to that 6 meg Z80.

There are some very nice points to this system, not the least of which is that the whole keyboard can be redefined and there is about 2K type ahead supported. 'Type ahead' is not a feature that most Apple users are familiar with though most other systems have it. It allows the computer to save keyboard input while other tasks are being done. In WORDSTAR this can be a highly desirable attribute as a file can be edited WHILE another is being printed with no extra hardware or software required. I don't speak too much about this Wordstar feature because on the Apple without type ahead, editing a file while printing is an absolute ordeal due to keyboard input being lost during times when the CPU is concerned with print/disk related tasks.

On the negative side, the system had to be re-written to drive this hardware, so the standard Microsoft CP/M disks will not boot directly.

Although the cost was not fixed at the time of writing, I believe that this version of CP/M (software & hardware) will be in the vicinity of $650 complete. For further information, Paul Berger of APPLIX is the person to contact.

Scottish made

The second version of CP/M is a foreign job made by a Scottish company called CIRTECK. It is the version that I am using sitting here under the trees.

Cirteck approached the CP/M problem along more traditional lines, staying with an interface board which is plugged directly into the //c. Remember how we noted that the *//c* has no slots? Well, this is where the Cirteck boys and girls have been particularly creative - they made a 'slot' by removing a chip. Ouch! Not the sort of thing that's everybody's cup of tea to install, but for a good many people, a tremendous solution.

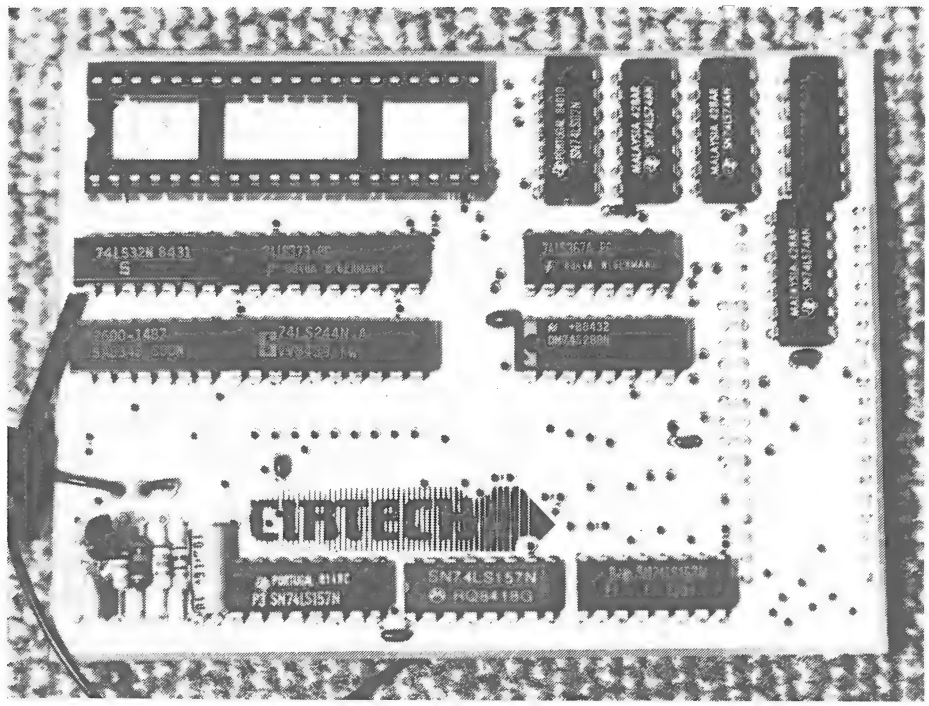
To start, the *//c* has to be opened. This is achieved by unscrewing and then prying the computer apart. When I installed the board, I found that most time and effort was devoted to just this task. It's not difficult but it's fiddly and some gentle force is required. Once the unit is apart the keyboard and the disk drive can be moved effortlessly, revealing the IC that needs removal.

The IC in question could only be the 65C02 and removal is slightly unceremoniously achieved with a little help from a screwdriver.

Care needed

Care must be taken through this operation in order that the chip is not damaged either by the screwdriver or by any static which may be on your hands. The best approach before any IC removal is to place one's hands on a connected power supply case (earth). A similar effect can be achieved by touching water pipes or even large metal objects such as filing cabinets.

When the chip is removed, it is then replaced onto the interface board. If you have a look at the photograph, you will see an empty socket at the top left. That is the new home for the 65C02. The Z80 in case you have looked and couldn't find, lives on the underside of the card.



Now, the last tricky bit. Also not visible because they're on the other side are the pins to insert the card into the socket previously occupied by the 65C02 on the motherboard. The action is slightly hindered by not being able to see the pins as they are being pushed in. When I put it together the first time, I must admit I hurried and on powering up had the unpleasant surprise of seeing a screen covered in inverse blocks.

Screen problem

As the //c does not belong to me, I instantly had visions of a slightly plump and highly emotional Welsh publisher standing outside my house, waving clenched fists and shouting abuse. The machine was off in an instant. After removing and resetting the card however, the message 'Apple //c' appeared and I lived again!

The most delightful aspect however is when the machine is put back together and screwed up. The Z80 is invisible to the system unless a normal Microsoft CP/M 2.23 disk is booted. There are no leads hanging off and to all intents and purposes, your *//c* looks just like every other *//c*.

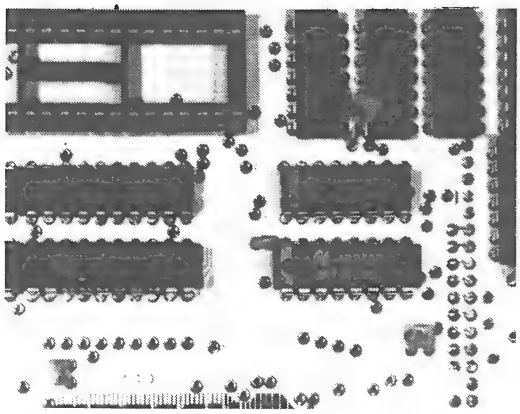
But what a mass of power hiding under that hood. Particularly when the RAM DISK becomes available (late April). With this piece of software, about 60K should become available for data storage and ultimate transferral to a data disk - effectively making your single drive //c into a one and a half drive machine.

Benchmarks

Benchmarking the MBASIC (provided with CP/M)

In order to see if there was any substantial speed difference in code execution, I timed the //c APPLESOFT against //c MBASIC against II+ APPLESOFT. It perhaps was not the fairest of tests in terms of Applesoft as this BASIC is in ROM and not in RAM where MBASIC ends up. However I was only looking at broad comparisons:

IIc or not IIc



```
5   DEFDBL W-Z
10 FOR A=1 TO 500:NEXT
20 ?"GO!"
30   FOR I= 1 TO 1000
40W=I^.5:X=I/123.456:Y=I+789.012:Z= I-345.678
50   NEXT
60 ? CHR$(7);"STOP"
```

APPLE II+ A'SOFT	APPLE //c A'SOFT	APPLE II+ MBASIC	APPLE //c MBASIC
1.42.25	1.42.50	1.04.65	1.02.88
1.41.76	1.42.01	1.04.88	1.02.64
1.42.30	1.42.10	1.04.24	1.02.91

adding in 45 PRINT W, X, Y, Z for output to screen

3.05.33	3.15.28	5.48.05	6.57.63
3.04.98	3.15.22	5.47.93	6.57.45
3.05.28	3.15.34	5.48.12	6.58.01

The program is one which causes the CPU to do a lot of mathematics. In the Applesoft version, omit line 5. This line sets variables W to Z as double precision numbers for MBASIC.

Looking at the times (min. sec. 100ths of a sec), the Z80 is clearly operating much faster than the Apple's 6502. However, both these Z80 boards use the Apple's RAM and IO routines to display data on the screen, so there is a large amount of time wasted passing the data backwards and forwards when video is used.

To end, I must repeat that I was highly impressed with the CIRTECK board.

Use was faultless, though the version I received did not have the RAM disk software. I did however have two major grievances.

The first is that installation does require a good deal of care.

The second is that I don't own a //c of my own.

Educating the Apple

BEYOND THE RISING SUN: DISCOVERING JAPAN

by Lynne Ryder

Educational role play
- 1 disk
- 1 manual
Requirements - 48K
Cost - $63.00
Available - Micro Nationwide
Mona Vale, NSW

If you are a teacher who likes to integrate your subject areas under a theme then this program could be of value to you. It is definitely not a stand-alone piece of software. I tried the disk without looking at the manual and was quite quickly plunged into the depths of boredom. However, I persevered and removing the disk from the drive thumbed the scanty manual.

Here I began to change my mind. The manual is a set of loose leaves meant to be inserted into a ring binder. The information given was background - something that could be used as a starting point to a theme on Japan, and some follow up activities. Although these notes cannot be used to teach, I certainly saw how they could be used to build a framework for study - a framework within which the program would be useful.

On the program, I thought it would best suit upper primary classes and possibly very lower secondary. Older children, would either lose interest or be tempted to make the clearly inappropriate choices to 'just see what the program would do'.

As a game, 'Beyond the Rising Sun' is a simulation of life in Japan over a ten year period. The main objective is to accumulate points in the three major areas of money, success and family harmony through a series of circumstances requiring decisions.

If you are a school considering purchase of this program or one similar, you will need to tap into wider resources in order to make the software meaningful. For example, the Japan Information Service in Carrington Street, Sydney can provide you not only with relevant information, but also with films and teachers kits. For city area phone bookings for films is fine but for kits etc. it's best to write, or better still encourage your students to write on behalf of the class. Teachers kits are unfortunately only available for school libraries but are well worth the effort of writing.

To sum up, this could be a very effective piece of software, but it will require a motivated class and a reasonably heavy teacher input.

PUNCTUATION 1.

Drill and practice on the computer
- 1 disk
- 1 manual
Requirements - 48K
Cost - $59.95
Available - Micro Nationwide
Mona Vale, NSW

This program is the first in a series of two, and Ian Miller - the head of Micro Nationwide - tells me that if both are purchased together then the cost is $109. Incidentally, the second program deals with the comma.

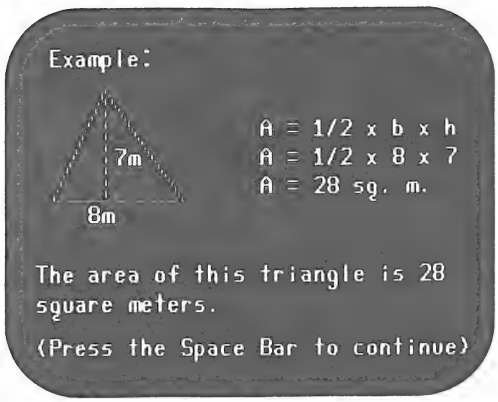
This program looks at end punctuation - the full stop, question mark and exclamation point (as it is called). The user is given a sentence to which the appropriate punctuation must be added. Each punctuation mark has its own

BEYOND THE RISING SUN

THE JUKU

In Japan, students are under great pressure to perform well at school and to earn high scores on a series of national exams. Admission to universities and junior colleges is based largely on the scores one earns on these exams. In order to simulate this situation, a small exam has been built into the simulation. This exam consists of 9 questions 3 each from the subjects of Math, Geography and Japanese. Japanese has been included as a representation of the fact that Japanese students must pass a test in English to graduate from high school. To do well at this simulation, players must do well on the exam. As in real life, it is only by passing the exam that one can go to university and then on to a good career.

To help them prepare for their exams, the student players are given two opportunities to attend a cram school, or JUKU. Each time they choose to enroll in Mrs. Huku's Juku, they can elect to study one of three subjects: math, geography or Japanese. In each case, the program presents and reviews the material that will be covered on the exam. Neither these juku sessions nor the exam questions should be particularly difficult for most secondary students. Nevertheless they are hard enough to generate a good variety of scores and to reward those who take the time to work through the juku classes carefully. It is expected that most students will find that they need to play BEYOND THE RISING SUN: Discovering Japan, more than once before they can pass the exam and earn admission to university.



sound, so working at the keyboard is livened up. If too many errors are made, the program loops through for repet-ition. For those who still fall by the wayside, two separate sheets of sentences are provided for duplication, distribution and further work.

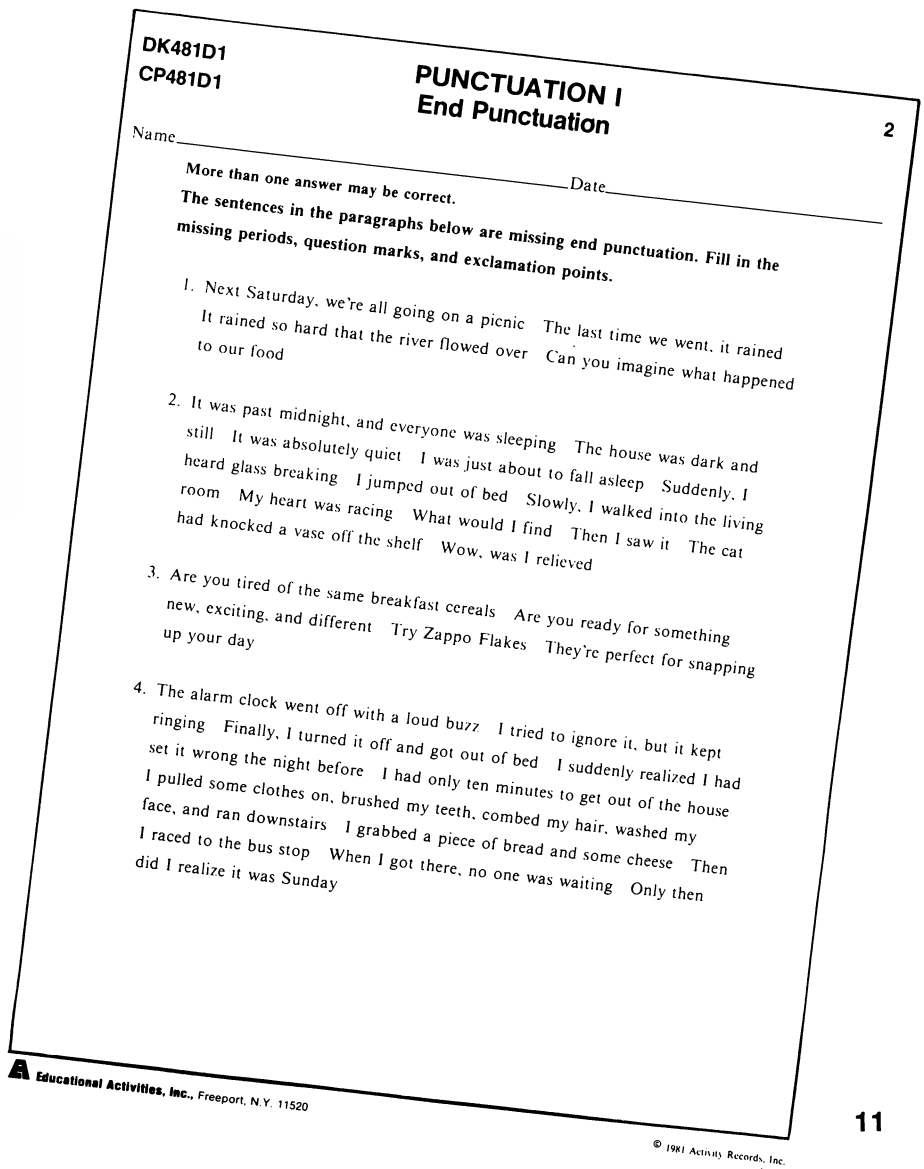
Although it does give definitions and examples as it works through each of the categories, the program will not substitute for the teacher in any way.

The best feature of the program is that it allows the user the option of three separate speeds - according to the level of reading skill. Continuous reinforcement of the definitions is also provided and some use of graphics is made.

The most annoying feature I found was that the <SHIFT> was not necessary to access the '!'. To me this has to be bad training for children as it is an incorrect use of the keyboard. Those who will argue against me here saying that younger children would find it far easier to 'just hit a single key' may be forgetting the level and content of this program. If the authors were indeed truthfully worried about the younger child, they could have added a keyboard overlay similar to that in 'Dino Dig'. Remember, Dino Dig is two disks, manual and two keyboard overlays for $39.95, so cost of these bits of plastic should not be the prohibiting factor.

What definitive comment can be made about 'Punctuation'?. Perhaps only that it does very little that a stencil can't do except to allow self marking and give children time on the computer.

The first decisions concern school and leisure.And, then there are, of course, exams to pass. The three subjects tested are - mathematics (area of triangles), geography (capital cities of Asian countries) and Japanese (English meanings of Japanese words). If you pay to be tutored then you will



DK481D1
CP481D1

PUNCTUATION I
End Punctuation

2

Name_____ Date_____

More than one answer may be correct.
The sentences in the paragraphs below are missing end punctuation. Fill in the missing periods, question marks, and exclamation points.

1. Next Saturday, we're all going on a picnic The last time we went, it rained It rained so hard that the river flowed over Can you imagine what happened to our food

2. It was past midnight, and everyone was sleeping The house was dark and still It was absolutely quiet I was just about to fall asleep Suddenly, I heard glass breaking I jumped out of bed Slowly, I walked into the living room My heart was racing What would I find Then I saw it The cat had knocked a vase off the shelf Wow, was I relieved

3. Are you tired of the same breakfast cereals Are you ready for something new, exciting, and different Try Zappo Flakes They're perfect for snapping up your day

4. The alarm clock went off with a loud buzz I tried to ignore it, but it kept ringing Finally, I turned it off and got out of bed I suddenly realized I had set it wrong the night before I had only ten minutes to get out of the house I pulled some clothes on, brushed my teeth, combed my hair, washed my face, and ran downstairs I grabbed a piece of bread and some cheese Then I raced to the bus stop When I got there, no one was waiting Only then did I realize it was Sunday

Educational Activities, Inc., Freeport, N.Y. 11520

© 1981 Activity Records, Inc.

know the answers to two of the exams. A good 10 or 11 year old however could equally well save his/her money.

Following school the decisions continue with choices concerning what to do after high school, the area of further study, jobs, dating and marriage. A player must try to accumulate at minimum 100 points in each of the three major areas before the game ends. Progress graphs are given periodically, so you have a good idea of how you are doing at most times in the game.

Points can be both gained and lost according to the decisions made - these do become predictable once the user is familiar with the style of the program. Each player is given a total of 45 points at the start in the categories of money and family harmony although the number in each area will vary from character to character. In the area of success, players must earn all the points for themselves.

There are six different characters - three boys and three girls and although sex is determined by the player, the character is chosen at random. The player is told of his/her family and the position they hold. Each family is then given a rating (randomly selected) between very traditional and very modern and this has an effect on the way that points are awarded for the various decisions made.

Playing time varies from approxmately ten minutes to one hour, depending on how the game is played, athough at three points it is possible to save to disk and return at a later time - beware there is a limit to savable space and once the disk is full some games will have to be erased.



SOFTWARE LIBRARIAN

Database program
- 2 disks
- 1 manual (loose)

Requirements - 48K
- 2 disk drives

Cost - $59.95
- each additional data disk $15.00

Available - Micro Nationwide
Mona Vale, NSW

This is an excellent data base pro-gram which can not only be used by the teacher or librarian but is so simple that children would also find it extremely valuable. Although it has been written with the object of setting up a data base of software available in the school for use mainly in the library, there is little reason why it cannot be directed into other areas where a database is required.

The only problem that would arise is that it is not possible to change the record headings.

One consideration which must be foremost before purchase is that unlike most other databases, even the data disks are copy protected. I found this quite unusual. The database I work with exclusively is dBase II, a CP/M based piece of software which is extremely powerful and flexible. dBase II program disks, not to mention data disks, are copyable. Other systems I have seen which are copy protected, either protect the program disk only, or if the data disks are protected, have a utility which allows the user to create as many as required.

It may be a cost consideration - dBase II is around $540, but when I looked at my data disks, including backups, I counted 42. If I had needed to purchase these at $15 each, then the program would be expensive indeed.

However, if you are not modifying the usage, then for the average school the number of data disks certainly would not be excessive and files not used can be deleted.

The program allows for 5 data entry fields:

TITLE
GRADE LEVEL
SUBJECT
CATALOG NUMBER
PROGRAM DESCRIPTION

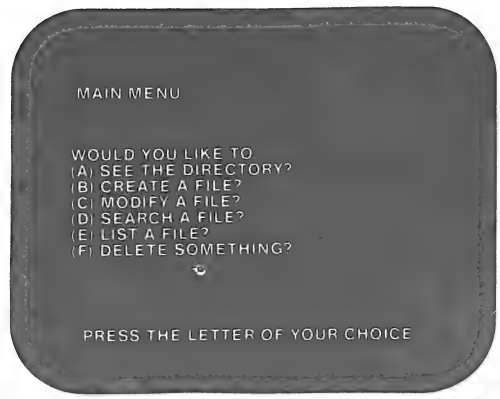
with no alteration of field name being possible.

Searches can be instituted on Title, Grade Level or Subject.

To sum up, I felt that this software could be very useful in the school set-ting, or even at home when a large num-ber of disks need to be cataloged. My main criticism was about the copy pro-tection on the data disks - I simply feel insecure with only one copy of my data existing. Not being what could be called a helpless female, I tried to back up my data with a bit copy program. There were no problems, so anyone who has EDD3, COPY II+ 4.4 or Locksmith 5.0 will probably not loose any sleep and can disregard my criticism.

MAIN MENU

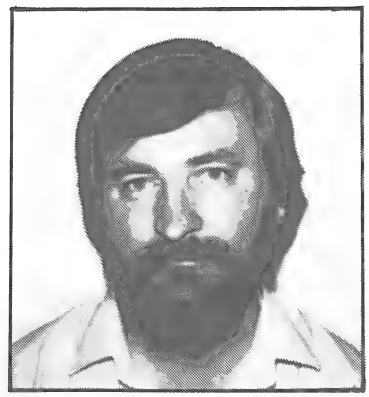
After the disk is booted, the Educational Activities logo and the Software Librarian title frame will appear. The **space bar** should then be pressed to see the Main Menu.

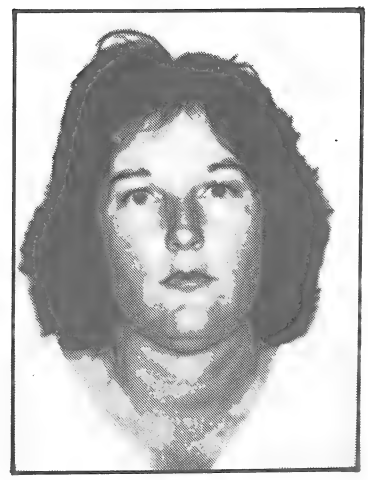


Expose Yourself

Finally the promise is being realized. In this issue Cecilia and Robert Perrott talk about how they became involved in writing educational software and setting up EUREKA SOFTWARE. Both are very friendly and approachable people, and I am glad to hear that early teething problems are being overcome and Eureka is experiencing growth.

I was also pleased to see that they included some advice to those who may be considering writing software but have had difficulty in either starting or in realizing their objectives. Editor.





Beginnings

We originally bought our Apple IIe as a hobby computer in 1983 and discovered that we enjoyed working on it together. Our interest in educational software was prompted by the lack in quality of a number of rather expensive programs we bought our children. To us, educational software must be of the highest standard as children can be easily discouraged if they are forced to persevere with an inferior program. To balance this, parents should not be expected to hand over a month's wages to bring useful computing home to their children.

We thought we could do a better job at a fairer price.

Development

Our lead time for the first two packages was about twelve months. Firstly, we investigated the educational market as thoroughly as possible given our limited resources in both time and money. This led us to decide to start with programs for younger children. Fortunately, we can thank a number of people for helping us through the testing stages with creative criticism and a multitude of ideas.

Because we did not wish to release an incomplete or bug ridden program, we only began marketing our software under our business name - Eureka - since January 1985.

Future Directions

We have at present several programs in the development stage and four in the programming stage. Our next release is hoped to be a story writing program which would be suitable for four to ten year olds. Although there is a temptation to move into games we are still extremely keen to concentrate upon the educational market and particularly to aim at preschool to late primary.

Personal

We are both in our mid thirties and between us have many years of experience in both education and computing. Although living in North Queensland makes marketing our software more difficult, our programs are now becoming available through a number of sources such as Beagle Computer Services and other retail outlets. Unfortunately for us, we find the relaxed lifestyle in this corner of Australia hard to beat.

Concluding

We would like to finish by offering a little advice to anyone setting out to write educational software. Spend some time and effort in determining what relevance the programs will have for the group you are aiming at.

Don't work in a vacuum. Go out and look at the curriculum. Talk to teachers AND children - then sit down to write. From our personal experience we found that programs will change in size and shape as the ideas develop, so always make sure you don't lose sight of your goals.

Can you be ruth and a loving paren

There are many ways for you to be more competitive in the way that you go about your business. (The faint-hearted would call some of these ploys ruthless.)

But there is one way that allows you to improve your business efficiency, and give your kids a head start at the same time.

It's the new Apple IIc.

Apple IIc. The 8 pound heavyweight.

For such a powerful, capable machine, the Apple IIc is extremely compact.

The new Apple weighs just less than 8 pounds, half as much as computers with half its power. It has been designed to be the same size as a 3-ring binder, not a 3-ring circus.

It has over 10,000 software programs written for it. With educational programs that graduate from Spelling to Acid-Based Chemistry.

And with business programs that range from Inventory Control to Sales Analysis.

Apple IIc. The perfect business partner.

When you take your Apple to work, you'll find there's an Apple program to help you keep records, manage finances and prepare, file and retrieve documents. There are many Apple programs written for specific use by people such as farmers, doctors, lawyers and accountants.

With an Apple printer you can easily turn screeds of information into graphs and charts in seconds, not in hours.

Should your office possess a mainframe computer, your Apple can connect into it.

Whether you're working directly with a mainframe program or transferring wads of information onto a program disk for your later use, you will soon see that having an Apple IIc on your desk is a lot smarter than having a dumb terminal.

In no time, your nights and weekends of being office bound, simply because the computer's there, are over.

Apple IIc. The perfect teacher.

When you take the Apple home you'll realise that a perfect, patient inspiring teacher is never far from hand.

After plugging the Apple into a normal television or an optional monitor, the first of 6 self-explanatory programs can be inserted into the built-in disk drive.

Young and old will very quickly realise how simple Apple has made it to master the personal computer.

And in no time at all, young people will find themselves at the door of one of the most unusual libraries ever assembled, the Apple software library.

Even though there are new programs written for the Apple every day, there are currently over 2000 education based programs available.

At their own pace, with the new found

less in business
t at the same time?

concentration that a computer creates, your children can take themselves on a private tuition course that covers virtually every subject on the school curriculum.

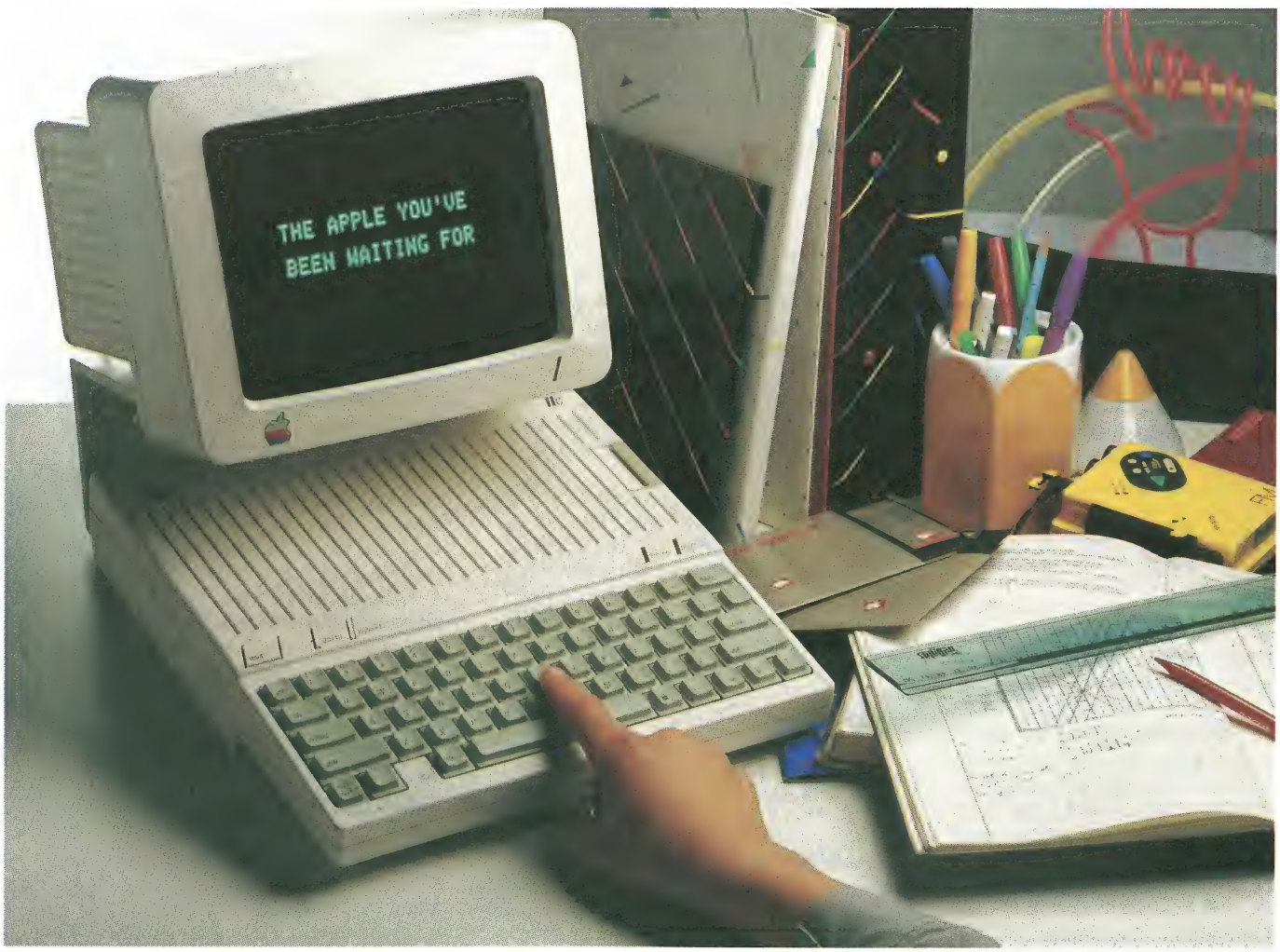
Whether they're learning to read music or a foreign language, your children will be enjoying the considerable advantages of a student to teacher ratio of 1 to 1.

Whatever the subject however, many people believe that familiarity alone with a computer is going to be a tremendous advantage in the future of a young person growing up today.

Who knows, an Apple may give your kids such a head start, they may never even have to be ruthless in business.

For the address of your nearest Apple dealer, phone Sydney 908 9088 or toll-free (008) 221 555.

apple



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Working together

by Gareth Powell



Nobody seems to clearly understand the idea of computer networks. It is not, I am sure, that there is any intention to confuse the user. But neverthless the confusion exists. Ask any expert what is meant by networking computers and you will get any one of a hundred different answers.

The benefits of using a network at even the lowest level are impressive. In the first place, and most importantly, they allow several machines to use one peripheral device. Let us look at the simplest of examples.

In an office you have three Macintosh computers. Or Apple IIe's or Apple IIc's. In the main they are used for processing orders and maintaining accounts. The ends results need to be printed out.

It does not matter what printer you have - dot matrix, daisy wheel or, the latest development, laser - you will almost certainly only need one. Most of the time a computer is being used, the printer is not being in action.

Maximum use

Networking allows you to maximise the use of the printer and therefore minimise its cost - providing the cost of networking is less than the cost of two printers. This is a rough rule of thumb but it works out pretty well in most real life situations.

The same applies to all other peripherals which cost significant money and are not utilised for the majority of the time that the computer is working.

The ideal situation would be where you could connect the peripherals to the computers involved with a simple wiring system that did not require an army of electrical contractors and computer experts to instal.

And it is sad to relate that, until recently, the computer industry just did not provide such a simple solution. One that would work straight out of the box and not cost an arm and a leg.

Enter AppleTalk, an integral and essential part of the MacOffice, which is specifically designed to attend to this problem.

Note well that this is not a full network in the computer sense of that term.

Apple have never claimed that it is and attempts to use it outside its design parameters, its inherent limitations, will undoubtedly end up in tears before tea-time and much tearing of hair and gnashing of teeth.

Apple very correctly and intelligently suggest that it is ideally suited for "work groups" rather than total companies. I'll go along with that.

Cheap connection

What AppleTalk will do, and do supremely well and more cheaply than any other system in the history of micro-computing, is connect together a limited number of terminals and intelligent peripherals (more on this later) so that they can interreact.

It will also in the near future act as an entry point, a tributary of a full scale Local Area Network or long haul networks such as the Telephone Company's Austpac.

This may not be your definition of a networking system. But within its defined and perfectly acceptable limits that is precisely what it is.

When other computer manufacturers start using phrases such as "But where are the file servers?" it is time to turn a deaf ear.

They are asking you to judge the MacOffice as if it was something it has never claimed to be - a full-blown Local Area Network with all the bells and whistles.

Different tack

Apple have taken a totally different tack to almost every other manufacturer - remaining true to their original concept of the personal computer being easy to operate, simple to comprehend and relatively inexpensive.

Steve Jobs, co-founder of Apple, said:

"I think we're holding true to our vision of trying to remove the service and support requirements from the equation of success so that we don't have to send out a person at a thousand dollars per half day to help you instal your computer system."

Cheap and easy

Apple have made sure that the communications system itself is easy and inexpensive to install.

To achieve this they have made the

decision that intelligence, active intel - lligence in the form of micro-processors, has to be built into all the peripherals so that the messages that are passed backwards and forwards are as efficient and as compact as possible. We will see precisely how this works when we look at one of the peripherals, the LaserWriter, in some detail later.

Bearing both of these two points in mind it comes as no surprise that the speed at which information is transferred within the MacOffice/Apple Net is theoretically dramatically slower than on a fully fledged Local Area Network.

Does this matter?

Not in the slightest provided that the resulting network is kept within reasonable bounds, within the sort of size frame the original designers had in mind. And that the peripherals are intelligent and self-sufficient enough to work on the minimum amount of transmitted information.

Steve Jobs again, "We think that networking is going to start from the bottom up in small work groups."

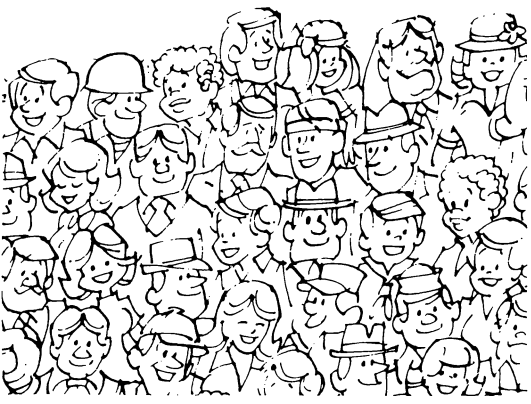


Technical details

The AppleTalk/MacOffice network is built around the Macintosh serial communications chip, a two channel Zilog 8530 SCC that provides synchronous and asynchronous data communications at speeds of up to 230.4K bits per second.

Do not get your knickers in a knot worrying about the technicalities of that last little lot.

The point to bear in mind is that it is all built-in, all self-firing, all semi-automatic. It is true that this chip only runs at 230.4K bits per second. This may sound fast to you, but in network communications where 1 Megabit per second is standard, it could be considered slow. However, that speed limit is imposed by a built-in self clocking system - it is perfectly feasible that this rate can be increased to 1 Megabit by introducing an external clocking device. But this would detract from the elegant simplicity of the scheme.



Universal standards

And it might stuff up Apple's chances of setting an universal standard.

If you accept that the telephone and the computer are becoming an integrated whole, and you should because it is so, then in future these networks will carry digitized voice as well as data.

The standards that are set will come from the CCITT (Comite Consultatif International Telephone et Telegraphique) and the informed money says they will be setting standards of up to 192K bits per second which is as near as spit to the AppleTalk standard.

Worth noting also that AppleTalk - /MacOffice works on a packet switching scheme which closely follows the standards laid down by the International Standards Organization for their Open Systems Interconnection model through layers 1 to 5.

Without getting unduly technical, Apple have made a real effort to produce a system that is well within the mainstream of communications and should facilitate inter-connection with other networks. The same is not true of all other computer manufacturers.

Two wire cable

Physically, AppleTalk uses a simple two wire cable. True it is shielded to prevent extraneous information being fed in by induction but it is still as easy to handle and instal as telephone wire.

Connection to each computer is made through the printer socket and connection has been simplified to the point that you need no special set-up to move a computer from one position to another. You plug it in and AppleTalk sorts out what it is, where it is and what it wants to know. It is totally self-testing and selfadjusting.

Each computer and each peripheral is called a node.

Why, I know not.

Computer engineers have a love affair with words in the English language that are unused in normal polite company.

In theory you can link up to 32 nodes into one work group, where each computer and each peripheral counts as a node. And they all have to be within a distance of 300 meters.

A dozen nodes

In fact, the number of nodes in a typical set-up will probably be not much more than a dozen or so.

If you accept the idea of the work group then these fgures are by no means restrictive. And it is important to realise that work groups can themselves be linked on to the other through a bridge which would connect two AppleTalk networks together at two spare nodes.

The key to the design of this simple circuit is that the peripherals are being given the intelligence to handle the signals coming down the line.

Laser printer

Let us look first at the LaserWriter which is the first peripheral to become available. It is built around the central machinery core of the Canon LBP-CX. This is the same machinery that is used in the Hewlett-Packard and the Siemens laser printers and no doubt we will soon be seeing it in a wide array of disguises.

But the Apple version is different - very different. It still works on the basis of 300 dots per inch resolution which is extremely sharp indeed.

To get this into perspective it helps to realise that the best phototypsetting machines work at 1,200 dots per inch. If you are heavily into graphics you may well be able to tell the difference. But for the record, this article was set on the Apple LaserWriter.

If you guessed, then you probably are in some way involved in the graphics arts. Most people we have consulted cannot tell the difference.

Differences

The LaserWriter will happily perform with graphics or any of a wide series of typefaces. In this one aspect the

LaserWriter differs from other laser printers- more differences in a moment.

To send that information sorting out the graphics from the typefaces down the line in the normal fashion through an RS 232 interface would take rather longer than is reasonable.

If you were running at 19.2 K bits per second then transmitting the 7,920,000 bits that makes up a full page would take an unacceptable seven minutes. Even galloping down the AppleTalk network at full speed takes over 30 seconds.

As the printer can woof out six pages a minute with great ease (and this speed is due to increase dramatically) this represents a bottleneck.

Neat solution

The neatest way to get around this problem is to give the printer some memory and some intelligence so that prerecorded fonts and designs can be stored and called up with a simple signal.

Apple have done this with a vengeance.

The LaserWriter contains a totally unbelievable half a Megabyte of ROM (Read Only Memory) and an even more unbelievable 1.5 Megabytes of RAM (Random Access Memory) both of which are controlled by a 68000 processor steaming along at 11.2 Megahertz.

There are very few personal computers in the world equipped with this sort of power, memory and intelligence. Leave alone a printer.

Few chips

Even more astounding, Apple have managed to achieve this with only 34 chips - most of them 256K memory. When you look at some other printer boards that do not contain half the memory, quarter the flexibility and over a hundred chips you realise what a miracle of design this really is.

The result is that with all of this memory and intelligence the LaserWriter when linked to a Macintosh through the AppleTalk network will turn out a dazzling page of print and graphics mixed every six seconds fastest speed, every ten seconds slowest speed when it is in its repeating mode. Original copies of a fair complexity take just over a minute.

It is very important to realise that the LaserWriter does NOT exactly duplicate the 80 dots per inch bit map of the Macintosh screen - remember the printer can work to 300 dots per inch. So the built-in memory smooths the curves, enhances the designs. The type fonts are built into the printer, not into the Macintosh.

What you see on the screen is a simulation of what you will see on the printed page - because the page can provide much finer detail.

Key philosophy

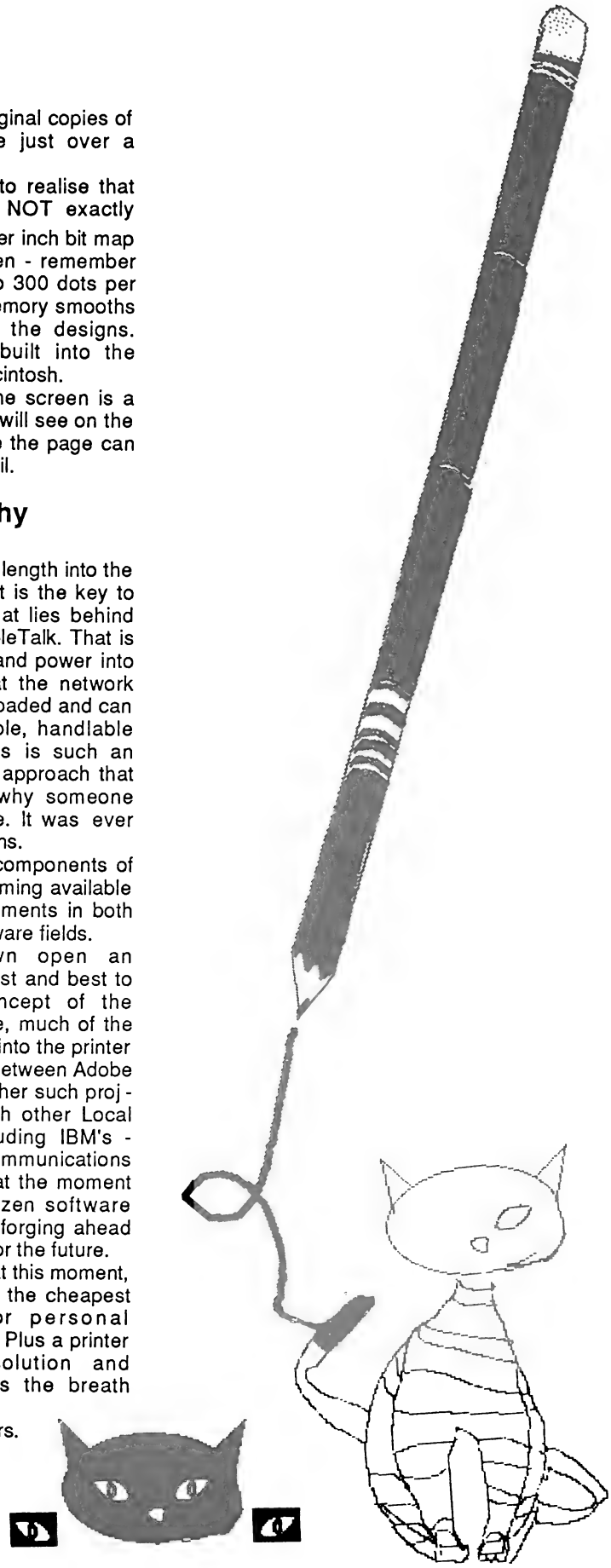
We have gone on at length into the LaserWriter because it is the key to the whole philosphy that lies behind the MacOffice and AppleTalk. That is to put the intelligence and power into the peripherals so that the network does not become overloaded and can therefore be kept simple, handlable and inexpensive. This is such an intelligent and obvious approach that we can only wonder why someone didn't think of it before. It was ever thus with great inventions.

Now that the initial components of the MacOffice are becoming available look to future enhancements in both the peripheral and software fields.

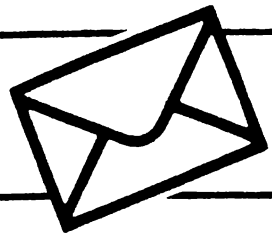
Apple have thrown open an invitation to the brightest and best to contribute to the concept of the MacOffice.For example, much of the intelligence that is built into the printer comes as a joint effort between Adobe Systems and Apple. Other such proj - ects are interfaces with other Local Area Networks - including IBM's - network databases, communications packages. Altogether at the moment there are over four dozen software and hardware projects forging ahead in this area. That is all for the future.

What we have now, at this moment, currently available - is the cheapest network available for personal computers in the world. Plus a printer of such power, resolution and flexibility that it takes the breath away.

That will do for starters.



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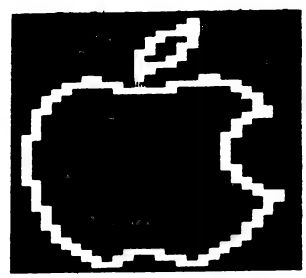
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GENE STEPHAN, Editor AAR.



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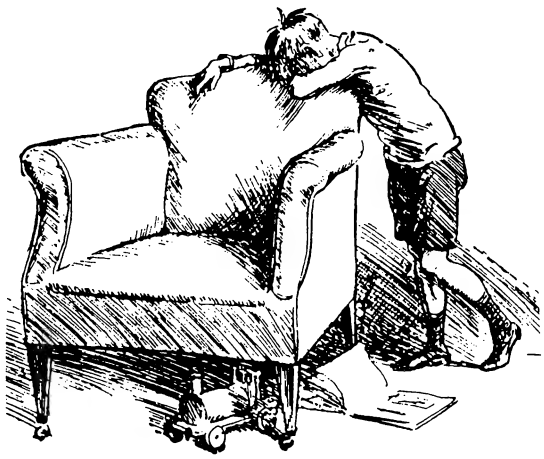
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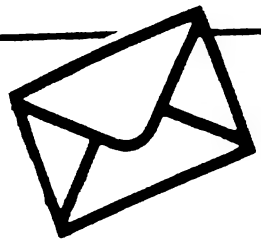
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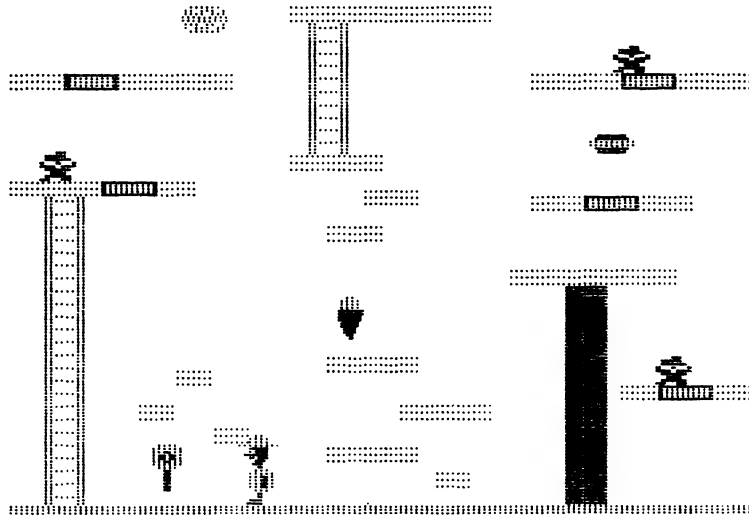
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Oh My Darling

MINER 2049er II
- 1 disk
- instructions
Requirements - 48K
- Apple II+, e or c.
- joystick
Cost - $39.95
Available - Beagle CS

If you played 'Miner 2049er' when it first appeared many months ago, then you are about to hear some great news. 'Miner 2049er II' is now available and ready to infuriate you with 10 more devious levels.





The job to do in Miner is to solidify the structure of the mine. When you walk over a particular section, you will notice that it changes colour. The object is to change the color of ALL of the level in order to proceed on to the next. Sounds easy? For some it probably is. For others, the mutants may pose the odd problem.

Mutants are to be found all over the mine and unfortunately, contact with these beings is fatal unless an item of 'loot' has been scooped up not too long before, thereby changing the mutants' colour.Getting loot and touching mutants is an important aspect to the game as it is here that your score can build up.

LOOT - 200 points
MUTANTS - 100 points
FRAMEWORK - 10 points/ segment
EXTRA BOBs - 10000, 20000, 30000 points

Movement of Bounty Bob is very clean with even a low end joystick responding quite well. Bob can move left and right, climb up and down ladders and jump up, left and right. Very handy, no, essential for comfortable living and survival.

Before continuing to describe the levels, a word on the sound. You can plug the 'auxillary in' of your stereo right into the 'cassette out' on the Apple and turn the volume up. Great for ingratiating your self with the neighbours and finally putting that Apple cassette port to some use.

THE LEVELS

Level 1. The Hyperspace Pads

This screen contains 'hyperspace pads' that allow Bob to to warp from any blue pad to the red one. The pads alternate in colour to make it more interesting and care should be taken not to warp up under a mutant.

Level 2. The Moving Holes

This screen contains sections of framework with a moving gap.

Level 3. The Matrix

The doctor would be proud of this level if he were around to see it. The framework is quite tricky in this one.

Level 4. The Spaceship

In a mine? Why not if you believe in mutants and the such. This level requires some manual dexterity as the 'ship' needs to be moved around the screen and the keyboard is the way to do this. Watch your fuel if you get to this level or another Bob may bite the dust.

Level 5. The Balloon

Even more remarkable in a mine. The balloon will only descend if Bob is standing on it. No mine should be without one.

Level 6. The Lasers

Fortunately the defences on this level fire in sequence or not too many would live through.

Level 7. The Bricks

A throw back from 'Little Brick Out'? Possibly as the bricked sections disappear when Bob has walked over them.

Level 8. The Lifts

This screen contains elevators which Bob can use for up and down.

Level 9. The Water Pipes

A nasty level where water rapidly leaks in and fills the lower portion of the mine. Sorry, but no aqualung is handy for poor old Bob to use.

Level 10. The Crane

To describe this level would be too give a little too much away. Let me just say that it's a level worthy to be called '10'.

Yes, I loved the game. If you have a few dollars spare and like this type of entertainment then I'm sure you won't be throwing your money away. A good one.

At the terminal

Basics of computer communications

Paul Zabrs, communications expert and author of the extremely popular software package 'Terminapple' continues with the second in this series. This month he talks about why good communications software is necessary and the features which separate the good from the not-so-good. Paul has also volunteered to answer reader questions on communications in his column so interested readers can write to Paul, care of The Australian Apple Review.

This month I will talk about the bare necessities and the desirable extras of good communications software. I have also included a glossary of terms which will be useful for this and future articles.

Firstly, what should communications software do?

If you have an Apple, a serial card and a modem but no communications software, you would know the answer. It is the software which determines how and what data is exchanged between your computer with all its hardware and the world beyond.

So, the software must be able to recognize a computer answering its own phone and then be able to move data. For example, if you wish to access the Apple Users Club bulletin board you would dial (02)451-6575. The phone is answered not by a person but by a computer. Your software must be able to recognise the carrier signal, recognise the valid data coming down the line and present you with a meaningful prompt on the screen display.

Next, the software must be able to store the data coming in from the remote computer. If you are communicating at 300 baud, the incoming data can be read from the screen relatively easily. At higher baud rates such as 1200 baud, a speed reading course is recommended if you at least wish to glimpse the information before it disappears off the top of your screen and into the great beyond. If you are trying to take notes at the same time, then you are in for an ordeal.

The software therefore must allow you to be able to save incoming data in a memory buffer and then give you the ability to view that data and/or store to disk. The reason why disk storage is so important is that it allows you to print out the information you have received at some later time. Data stored to disk as a text file can also be used with a word processor such as Zardax or Wordstar so you can include it in your reports, letters or memos without retyping.

But data does not move in only one direction. For example, if you wish to access the Source in the United States, you will need to enter your MIDAS identifier and password before your call even leaves Australia. The essence of communication is that it is two way. Software must be efficient so that program execution does not interfere with the flow.This is

A COMMUNICATIONS GLOSSARY

ASCII Code—American Standard Code for Information Interchange. A seven-bit code used widely in data communications to transmit the letters of the alphabet, plus the standard punctuation marks and certain control characters.

Acoustic coupler—A device that allows modem-generated audio signals to be transmitted into and received from a telephone handset. The handset is placed into rubber cups on top of the coupler. A small transducer at the bottom of the cups produces the actual signal.

Auto-answer modem—A modem that can answer an incoming call by generating a carrier tone that signals the originating modem its call has been received.

Auto-dial modem—A modem that can simulate a telephone dialer using either pulse or touch-tone dialing signals.

Baud—A unit of signaling speed, usually given as "baud rate." For most personal computer communications applications, baud rates of either 300 or 1200, which approximate 10 and 40 characters per second, respectively, are used.

Binary Number—Any number in a "base two" system, where the digits have the value of 1 or 0.

Bit—Short for binary digit (either 1 or 0), the elemental unit of digital information.

Buffer—Often called capture buffer. In general, a temporary storage place for data. A capture buffer is temporary storage for data "captured" from a communications link.

Byte—A unit of eight bits. Characters are often referred to as bytes, but each character in the ASCII set can be represented by only seven bits. Thus, a byte can be thought of as equivalent to a character for approximation purposes only.

Carrier—A steady signal that can be changed in tone (modulated) to transmit data.

Checksum—A method of totaling bits received by a computer for the purposes of checking errors in transmission.

Control Characters—ASCII characters that do not print out, but are used to control communications. Control characters can, for example, signal a sender to stop transmitting information when the receiver is busy.

Data—Information in code, text or numerical form, generally represented in ASCII code for digital communications.

Duplex—Refers to the two-way nature of modem communications. In full-duplex communication, both terminals can send and receive simultaneously. In half-duplex operation, both ends can send and receive, but not at the same time. With full-duplex, echo-back communications, a transmitted character is not displayed until it has been verified by the receiver.

Frequency—The number of cycles of an oscillating waveform that occur each second.

Modem—A device that modulates audio tones to carry digital signals and also demodulates the signals at the receiver so they can be understood by a computer.

Noise—Random disturbances that degrade or disrupt data communications, present to some degree in all transmission links.

Originate/Answer Modem—A modem that can either start a telephone call or receive one automatically. Some modems automatically assume originate or answer status, others require manual switching to the proper state.

Parity—A means of checking for errors by adding an extra bit to each ASCII character transmitted.

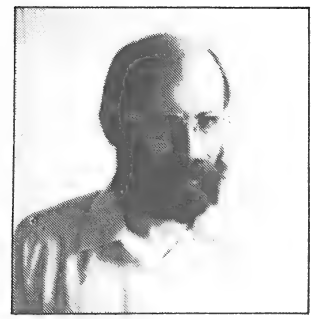
Protocol—A set of rules for the transmission of data. Protocols describe when transmission will start and stop, what error checking system is in effect and the like.

RS-232—A standard for transmission of serial data covering both hardware configurations and transmission parameters. Different manufacturers may implement some or all of the RS-232 standard in their communications products.

Serial data—Data sent one bit at a time, as opposed to parallel data sent several bits at a time. Modems operate on serial data.

Terminal—A device that receives or transmits digital information. Communications software is designed to control computers during terminal mode operation.

by Paul Zabrs





particularly true when you are receiving data directly into a disk file. The software must control the rate at which data is processed otherwise data will be lost during times of disk access.

Some features of communications software are not essential but can be useful. Unfortunately, the more of these features, the greater the cost of the package. A multitude of features which are never used can be an extravagance and in practical terms will lead to such things as the manual being thicker and relevant information harder to find. You may however consider some of the following in relation to your needs.

1. Multiple file transfer
2. Help on screen when required
3. Telephone directory
4. Automatic logons (macros)

Until next month, Paul Zabrs.

NEW APPLE IIc SOFTWARE AVAILABLE IN AUSTRALIA
(In addition to more than 10,000 II+ and IIe programs that will also run on the IIc)

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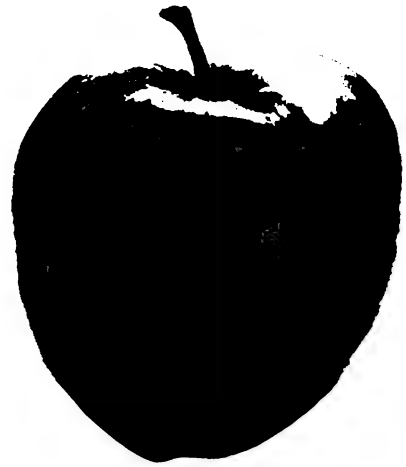
APPLE COMPUTER OF AUSTRALIA PTY. LTD.
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ACT 2601 Computer Information Management, 24 Marcus Clarke St. Canberra 062 48 6255; **ACT** 2606 ComputerLand Canberra, 22-24 Colbee Court Philip 062 82 2342; **ACT** 2609 ACT Office Equipment, 37 Townsville St. Fyshwick 062 80 4710; **ACT** 2617 ComputerLand Belconnen, 71 Oatley Court Belconnen 062 51 3188; **NSW** 2000 City Personal Computers, 55 York St. Sydney 29 2461; **NSW** 2000 Computer Wave, 325 George St. Sydney 291631; **NSW** 2154 Ferwild Computing Pty Ltd, 258 George St. Liverpool 600 8222; **NSW** 2017 T.I.M.S. 5 Powell St. Waterloo 698 7666; **NSW** 2067 Computertime 345 Victoria Ave. Chatswood 411 5757; **NSW** 2000 ComputerLand Sydney, 31 Market St. Sydney 290 2955; **NSW** 2000 Grace Bros City Store, Pitt St. Sydney 238 9023; **NSW** 2008 Logical Solutions, 87-91 Regent St. Chippendale 699 4918; **NSW** 2022 ComputerLand Eastern Suburbs, 119 Oxford St. Bondi Junction 389 4466; **NSW** 2038 The Computer Shop, 74 Parramatta Rd. Annandale 517 2999; **NSW** 2060 City Personal Computers, 2/100 Mount St. North Sydney 922 3600; **NSW** 2060 Computer Galerie, 66 Walker St. North Sydney 929 5497; **NSW** 2060 ComputerLand North Sydney, 150 Pacific Hwy. North Sydney 929 4499; **NSW** 2065 The Logic Shop, 330 Pacific Hwy. Crows Nest 439 7188; **NSW** 2066 New Generation Computers, 229 Burns Bay Rd. Lane Cove West 427 4781; **NSW** 2067 ComputerLand Chatswood, Shop 3 Chatswood Plaza Chatswood 411 7611; **NSW** 2070 Compushack, 1/303 Pacific Hwy. Lindfield 467 1933; **NSW** 2099 Computermat Dee Why, 665 Pittwater Rd. Dee Why 982 3288; **NSW** 2112 ComputerLand Top Ryde, 7 Pope St. Ryde 808 2866; **NSW** 2134 ComputerLand Burwood, 31 Burwood Rd. Burwood 745 4311; **NSW** 2134 ComputerLand Parramatta, Cnr. Church St. & Victoria Rd. Parramatta 683 3199; **NSW** 2134 Zofarry Enterprises, Cnr. Burwood & Parramatta Rds. Burwood 745 1888; **NSW** 2150 Grace Bros Parramatta, Argyle St. Parramatta 635 0366; **NSW** 2150 Trinity Computing, 1/9 Palmer St. Parramatta 683 4349; **NSW** 2154 Castle Computers, 260 Old Northern Rd. Castle Hill 682 2202; **NSW** 2170 Trinity Computing, 258 George St. Liverpool 600 8222; **NSW** 2200 ComputerLand Bankstown, Shop 1/57 The Mall Bankstown 709 5366; **NSW** 2200 Directo Computer Sales, Cnr. Appian Way & North Tce. Bankstown 708 5311; **NSW** 2220 Direct Computer Sales, 198 Forest Rd. Hurstville 57 9299; **NSW** 2228 Computer Connection, 629 The Kingsway Miranda 526 1404; **NSW** 2250 ComputerLand Central Coast, 48 Mann St. Gosford 043 241811; **NSW** 2282 Computer Cellar, 3/30 John St. Warren Bay 049 48 4050; **NSW** 2302 ComputerLand Newcastle, 464-474 King St. Newcastle 049 26 3744; **NSW** 2304 Computer Cellar, 62 Maitland Rd. 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Darwin 089 81 4749; **FIJI** Bhanabhai & Co., 127 Market St. Suva 31 3022; **PNG** BNG Trading, Mango Ave. Rabaul 92 2666; **PNG** BP Business Systems, PO Box 79 Lae 42 3666; **PNG** Burns Philp Business Systems, Champion Pde. Port Moresby 22 9206; **QLD** 4000 ComputerLand of Brisbane, 1 Adelaide St. Brisbane 07 221 9777; **QLD** 4000 Computers & Peripherals, Cnr. Creek & Elizabeth Sts. Brisbane 07 31 2330; **QLD** 4032 Complete Computer Centre, 605 Gympie Rd. Chermside 07 350 1255; **QLD** 4051 The Byte Shop, Shop 5 93 Enoggera Rd. Newmarket 07 352 6621; **QLD** 4068 Myer Brisbane, 318 Moggill Rd. Indooroopilly 07 378 5111; **QLD** 4101 The Computer Shop, 137 Melbourne St. South Brisbane 07 44 6926; **QLD** 4122 Complete Computer Centre, 1929 Logan Rd. Upper Mt Gravatt 07 343 4588; **QLD** 4127 Centrepoint Computer Sales & Rentals, 3354 Pacific Hwy. Springwood 07 209 4766; **QLD** 4152 Computer City, 82 Bennetts Rd. Camp Hill 07 398 6759; **QLD** 4812 Computerworld, Nathan Plaza, Ross River Rd. Aitkenvale 007 75 4300; **QLD** 4068 The Byte Shop, Shop 3 207 Moggill Rd. Taringa 07 371 0711; **QLD** 4163 Cleveland Computer Orchard, 23 Middle St. Cleveland 07 286 3777; **QLD** 4215 ComputerLand of the Gold Coast, 126 Scarborough St. Southport 075 32 8300; **QLD** 4350 Toowoomba Computer Centre, 180B Hume St. Toowoomba 076 32 7542; **QLD** 4558 ComputerLand Sunshine Coast, 18 Horton Pde., Aerodrome Rd. Maroochydore 071 43 1677; **QLD** 4606 Medlab Wondai Electronics, 28B Bramston St. Wondai 071 68 5511; **QLD** 4740 ComputerLand Mackay, Planella House, Brisbane St. Mackay 079 57 2577; **QLD** 4810 Northern Business Equipment, 271-279 Sturt St. Townsville 077 72 4122; **QLD** 4870 Computerworld (Qld) Earlville Shopping Centre, Cairns 070 54 4502; **SA** 5000 Computer Programs Machines & Services, 80 South Tce. Adelaide 08 212 2666; **SA** 5000 ComputerLand Adelaide, 122 Gouger St. Adelaide 08 212 7191; **SA** 5000 Myer Adelaide, Rundle Mall Adelaide 08 217 0123; **SA** 5000 Random Access, 21 Hindmarsh Sq. Adelaide 08 223 2505; **TAS** 7000 The Computer Place, 73 Murray St. Hobart 002 348 7777; **TAS** 7250 Computer Place, 87 Brisbane St. Launceston 003 34 1477; **VIC** 3000 ComputerLand Melbourne 123 Londsdale St. Melbourne 03 662 2133; **VIC** 3000 Myer Melbourne, 275 Lonsdale St. Melbourne 03 661 3342; **VIC** 3000 Random Access (Vic), 555 Collins St. Melbourne 03 621339; **VIC** 3000 The Logic Shop, 97 Franklin St. Melbourne 03 348 1488; **VIC** 3011 Western Applied Computers, 188 Victoria St. Footscray 03 689 8624; **VIC** 3040 Bus-Stop Computer Systems, 1017 Mount Alexander Rd. Essendon 03 379 6808; **VIC** 3058 Metropolitan Business Machines, 338-342 Sydney Rd. Coburg 03 383 2222; **VIC** 3067 Prologic, 663 Victoria St. Abbotsford 03 429 3188; **VIC** 3103 Choice Computer Centre, 327 Whitehorse Rd. Balwyn 03 830 5122; **VIC** 3108 Datapro Computer Systems, 5/861 Doncaster Rd. Doncaster 03 848 8299; **VIC** 3124 ComputerLand Camberwell, 399 Riversdale Rd. Camberwell 03 813 1300; **VIC** 3125 Astro Educational Services, 1-3 Ruby St. East Burwood 03 232 4000; **VIC** 3127 I.M.A. Computer Co. 292 Canterbury Rd. Surrey Hills 03 836 8835; **VIC** ComputerLand Box Hill, 899 Whitehorse Rd. Box Hill 03 890 0468; **VIC** 3175 Rob's Computer Centre, 295 Thomas St. Dandenong 03 791 2900; **VIC** 3199 Alpha Research & Development, 9 Wallace Ave. Frankston 03 789 4658; **VIC** 3199 Computers 2000, 29 Ross-Smith Ave. Frankston 03 781 4244; **VIC** 3205 ComputerLand South Melbourne 19/37 Albert Rd. South Melbourne 03 266 8647; **VIC** 3205 Insystems, 337 Moray St. South Melbourne 03 690 2899; **VIC** 3220 Geelong Computer Centre, 39 Gheringhap St. Geelong 052 22 2844; **VIC** 3350 Cygnus Computers, 128 Mollison St. Bendigo 054 42 4666; **VIC** 3350 Harmon Bros Sale, 602 Sturt St. Ballarat 053 31 3022; **VIC** 3400 Wimmera Office & School Supplies, 72 Wilson St. Horsham 053 82 5511; **VIC** 3500 Mildura Office Equipment, 91 Langtree Ave. Mildura 050 23 3611; **VIC** 3585 Cygnus Computers, 198 Beveridge St. Swan Hill 050 32 9011; **VIC** 3850 Latrobe Valley Computer Services, 260 York St. Sale 051 44 6155; **VIC** 3977 Associated Micro Technology, Shop 6 33-39 High St. Cranbourne 059 96 4928; **WA** 6000 Myer Perth, 246 Murray St. Perth 09 321 0151; **WA** 6001 ComputerLand Perth, Suite 3 SGIO Atrium, 170 St George's Tce. Perth 09 322 7188; **WA** 6005 Computer Choice, 1297 Hay St. West Perth 09 322 5651; **WA** 6009 Computer Age, 97 Stirling Hwy. Nedlands 09 389 1122.

A beginner's guide

The care and feeding of your digital pal

by Colin Beecroft



A few words on the random nature of electronic failures. Apart from some sure fire causes which I will show you how to avoid, the main source of computer breakdown occurs at microscopic level inside an integrated circuit. The why and how of IC failures are best obtained from a solid state physicist.

I can only give you the benefit of my experience gained during ten years of repairing faulty machines. Most faults are entirely random and quite unpredictable. One machine will run perfectly and an-other will be plagued with faults. Statistics don't lie, although the beleagured owner of a faulty computer may well feel like arguing the case.

If Statistical Analysis shows that we can expect one fault per two years per machine you can be sure that some-body, somewhere, will collect 10 years worth of failures in two months. It is unfortunate for the owner but at least some small comfort can be derived from the figures, it is only a matter of cold statistics, your computer doesn't really hate you.

WHAT CAN I DO ?

There are a few sources of computer failure that are under the direct control of the user. If you do something bad to your machine you can expect a higher than average failure rate. If you do something really nasty, it'll blow for sure. To give you an idea of what to watch for I will look at each part of a typical computer system separately. You'll notice however that there are three important common factors that raise their ugly heads in all cases:- static electricity, heat and humidity.

STATIC

Static electricity is caused by a surplus or deficit of electrons on a charged body. (You always knew you had a magnetic personality.) Usually the body in ques-tion is yours. Normally any static charge you build up is slowly dissipated into the atmosphere or lost to an earthed object upon contact. The dryer the air, the longer a static charge will remain upon your person.

Have you ever walked through a building with a dry air conditioned atmosphere across synthetic carpet and received a nasty 'bite' as you reached for the door handle? Try the same thing in low lighting and you'll be amazed at how big a spark can be generated.That same electrical discharge which you find annoying generally will prove fatal to your microcomputer. There are two approaches to the problem. First, ensure that you are at the same potential as your computer before you touch any part of it eg. touch the metal cabinet of your video monitor or some other earthed object (the kitchen sink?). Second and preferably, avoid picking up the static charge in the first place.

Static electricity is generated when two different materials are rubbed together eg. shoe soles on carpet, trousers across upholstery, plastic rubbed with silk. Install your computer in an area with vinyl or wood flooring, avoid carpet (particularly synthetic) like the plague. If your better half won't allow you to tear up the lounge carpet then look into some of the carpet treatment chemicals available for static reduction.

At least one commercial installation I know of, in a state of desperation, finally eliminated a very troublesome intermittent data corruption problem by tearing up the computer room carpets and replacing them with vinyl tiles. One other suggestion, watch the materials in your computer chair. Many comfy chairs use fabrics that can generate a good charge as you slip in and out of them.

HEAT

Your computer consumes electricity. The laws of thermodynamics (I've always wanted to say that) forbid the destruction or creation of energy, it may only be transformed from one form to another. The electrical energy your computer consumes is turned into heat. This simply means that to avoid heat related failure you must help your computer keep its cool.

Don't impede the air flow to the computer's already small ventilation holes ie. always put the machine on a hard flat surface, never on a blanket or thick table cloth that could reduce the air flow. Keep the computer away from sources of external heat eg. reading lamps, sunlight, radiators.

Avoid operation when the ambient temperature is extreme (that means Summer), or if you must, use a fan to ensure a steady air flow over the machine and keep operation to as short a time as possible. Now, if you think this sounds a little extreme, remember, it's not my computer that's going to suffer heat stroke and most commercial installations are air conditioned.

HUMIDITY

Normally this doesn't make no never mind. However, should the humi-dity reach 100 per cent, moisture will condense on any available suface at or below dew point temperature. If this should happen corrosion can cause problems which often will not show up until later. The sorts of problems caused by condensation are unpredictable key-boards and intermittent failures caused by poor contacts in the multitude of metal to metal connections in the computer.

This problem is more significant in seaside areas due to airborne salt. The solution to this one is to avoid leaving your computer in a cold damp area. Make your computer room inside a warm dry house, avoid garages and other out-buildings. I don't have to elaborate, but this is a terrific one for the computerist who is not well received by his better half in the lounge and looks destined for the chook shed.

DUST

The cleaner's bane. It gets on and into everything, keyboards included. Switch contacts don't like it. There isn't a lot you can do about this one other than cover your computer when it's not in use and keep it in a relatively dust free environment (if such a thing exists judging by my lounge room).

Smoke - same as for dust, it isn't good for switch contacts (or people, at the risk of making myself unpopular with smokers).

DISK DRIVES

Use good quality disks as some shed their oxide surface dirtying heads and causing read/write errors. Now to head cleaning. If you use good quality disks, keep your drive dry, dust free and happy you should clean its head every birthday (whether it needs it or not).

If you like to be very sure try twice a year. If it requires cleaning more often then you are either in business pro-ducing software or you need better disks. When you clean the heads use a reputable head cleaner available from most computer shops.

DISKS

You must not expose floppy disks to the following: heat, magnetic fields, bending or other physical violence, dust, greasy fingers. Even the minute particles of smoke reduce the reliability of disks (you have been warned!). A couple of other considerations. With usage disks become less reliable, some sources suggest 25 to 30 hours of actual rotation, so keep backups and relegate heavily used disks to non-vital jobs after they have shown you long and faithful service.

The base material of disks has a small but distinct thermal expansion so a hot disk does not have the same dimensions as when it is cold. Use only disks which are at ambient temperature. If they are otherwise, allow them to stabilise at room temperature before use. I have one disk which will only read reliably after sitting in a hot disk drive for 15 minutes.

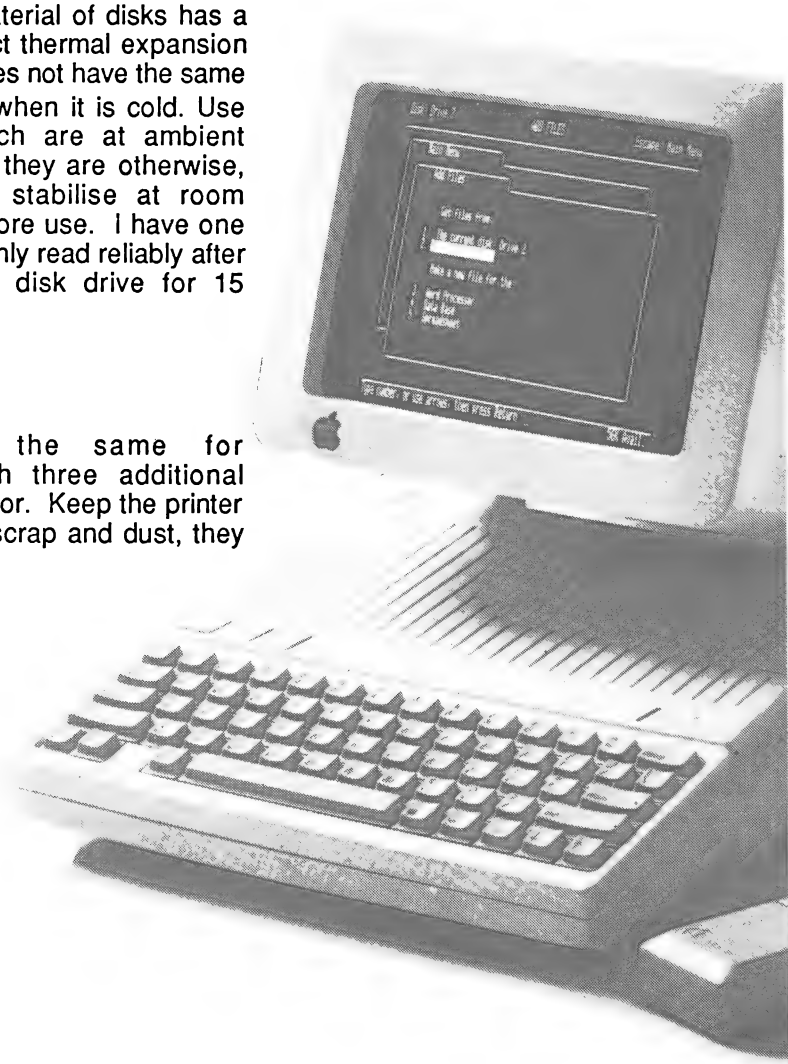
PRINTER

Essentially the same for computers with three additional things to watch for. Keep the printer clean of paper scrap and dust, they can clog the print head and jam the mechanism. Always use the recommended ribbon, a non - standard ribbon can snag the print head wires in dot matrix types or clog thermal printers. Be careful not to drive matrix printers in reverse characters for long as the high duty cycle of the wire drive solenoids can cause them to overheat to their det-riment (that means they blow up).

If you can remember that lot you'll be able to look after your computer system well and I hope it will reward you with long and faithful service.

As a friend of things electronic can I please ask one last favour? When it says in the handbooks and on inst-ruction screens 'hit return', just press it.

Your computer will love you and I'll have fewer intermittent keyboards to test my patience.



Starring Wordstar 2

by **Gene Stephan**

One of the initial reasons I gave for using Wordstar was the ability to modify and customize. Last month we looked at ruler lines and the ways in which these could be changed quickly so that text formatting could be carried out with a minimum of fuss. Occasionally, it is worth setting a separate program disk to a specific format so that when WS is run, the default parameters are set for that specific task. For example, when the text of this column is being entered, I use a right margin of 75, have right justification OFF and am agravated by HELP menus. Clearly the AAR disk deviates from the usual letter writing set-up.

To change WS to do our bidding requires 'patching' the code. Ordinarily, patching would be beyond the scope of the vast majority of users, however with WS the locations are documented.

Files required :
INSTALL.COM
WS.COM (or WSU.COM)
WSMSGS.OVR
WSOVLY1.OVR

For clarity, all Wordstar messages will be preceeded with a '-'. So, boot CP‖M, copy your WS disk and using the copy, let's give it a try.

A>INSTALL <RET>

-Do you want normal first-time installation of Wordstar?

-Y = Yes N = Display other options) N

From the 'Wordstar Installation Options Menu', select D which modifies the filename of our choice.

-Filename of Wordstar to modify?
WS.COM

Proceed through the terminal and printer options using 'U' (no change) to move speedily if this is not your first install.

-Are the modifications complete? N

Now we are at the point of patching. Remember that from now on, all thought must be in hex and not decimal. The 'H' following the numbers is a subtle reminder of this. The first location below deals with the initial level of HELP. A new value of 0 gives no HELP wheras 3 is the maximum. Values 0 to 3 are valid.

```
-Location to be changed  0360
-Address: 0360H  Old Value: 03H  New Value: 0

-Location to be changed  0380
-Address: 0380H  Old Value: 40H  New Value: 4A

-Location to be changed  0386
-Address: 0386H  Old Value: FFH  New Value: 0

-Location to be changed  03CD
-Address: 03CDH  Old Value: 00H  New Value: FF
```

Location 380 deals with the width of the screen. The largest number allowable here is (screen width - 4). In the case of an Apple with an 80 column card, the maximum allowable is 76 or in hex 4B. That is not to say that longer lines are not possible. Type any letter you like say 90 times, starting at column 1 and no spaces. The screen will actually display a different text window.

Location 386 is a toggle for right justify on or off. If Wordstar finds FF in this location, it will right justify the text. If 00 is found then the right will be ragged.

Location 3CD is a print location. If you are the type of person who does not believe in reading prompts and wildly hits <RET> when going through the print queries, then this is your location. If Wordstar

Customization Locations

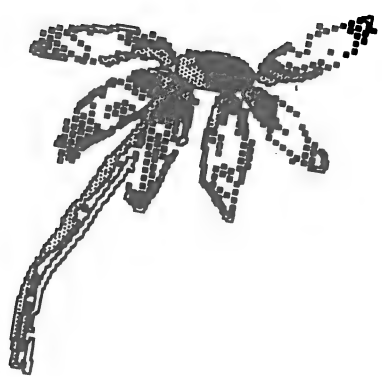
LOCATION	VALUE	NOTE‖VALID SETTINGS
037F	00	Initial left margin column. 0 to 3
038B	FF	0 will hide the ruler line
038C	FF	dynamic page break. 0 to disable
038D	FF	0 will hide line of ——s to show page
038E	01	single line space. 1 to 2 etc
038F	00	block move. FF to default column move

finds FF here, it will default to PAUSE between each page printed. It will save your roller from a good deal of ink.

A few other locations which may be of interest are detailed inTable 2.

When you have completed your INSTALL, enter a 0 for the location to change and your WS file will be updated on disk. Run the WS to see the difference. While on the question of printing and print options, you may be interested in the short summary of the so called 'dot' commands. These are used in the body of your text and direct WS to print in a variety of ways. If some don't seem to work, then check the INSTALL of your printer. Note also that for some of these commands your printer must have proportional spacing.

Table 3. summarizes these commands.



Command	Function	Units	Default value
Vertical spacing and layout			
.LH n ***	Line Height	1/48 inch	8 (48/8 = 6 lines per inch)
.PL n	Paper Length	lines	66 lines = 11 inches
.MT n	Margin at Top	lines	3 lines = 3/6 = 0.5 inch
.MB n	Margin at Bottom	lines	8 lines = 8/6 = 1.33 inches
Page breaks			
.PA	start a new PAge		
.CP n	Conditional Page	lines	
.PO n	Page Offset	columns	8 columns = 8/10 = 0.8 inch
Page numbers			
.PN n	Page Number		1
.OP	Omit Pagenumbers		
.PC n	Page number Column	columns	col. 33 (centre of 65 col. page)
Headings and footings			
.HE message	Heading		blank
.HM n	Heading Margin	lines	2 lines = 2/6 = 0.33 inch
.FO message	Footing		contains page number
.FM n	Footing Margin	lines	2 lines = 2/6 = 0.33 inch
Miscellaneous			
.. message	Comment		
.IG message	Comment		
.UJ n ***	microjustification	0 = OFF) 1 = ON)	ON (adds micro-spaces to justify the right margin)
.SR n ***	Subscript and superscript roll	1/48 inch	3 = 3/48 inch
.BP n	Bidirectional Print	0 = OFF) 1 = ON)	ON (prints left to right, then right to left)

Line heights *** only on printers which support micro-spacing

Command	lines/inch	Command	lines/inch	Command	lines/inch
.LH 1	48.0	.LH 8	6.0 (single)	.LH 16	3.0 (double)
.LH 4	12.0	.LH 9	5.3	.LH 18	2.6
.LH 6	8.0	.LH 10	4.8	.LH 20	2.4
.LH 7	6.8	.LH 12	4.0	.LH 24	2.0 (triple)

Character spacings (pitch) *** only on printers which support micro-spacing

Dot command	Pitch characters/inch	Dot command	Pitch characters/inch
.CW 6	20	.CW 13	9.2
.CW 7	17.1	.CW 14	8.6
.CW 8	15	.CW 15	8
.CW 9	13.3	.CW 16	7.5
.CW 10	12 (alternative-pitch)	.CW 17	7
.CW 11	10.9	.CW 20	6
.CW 12	10 (normal pitch)	.CW 24	5

★★★★★★★★★★★★★★★★★★★★★

Loderunner and Jumpman clinic

Loderunner Screen #4 *(Drol-hole)*

With this screen you have a little bit of time. The key is in manipulating the men to collect barrels and then TRAP them. Here's how it goes.

You start at the base and should quickly collect all available barrels.

Now straight up to the next level. As you go up, the men from this level go up.

This is neither here nor there - collect all available barrels and when it's safe go straight down the ladder and back to the bottom level.

Now, the man MUST be trapped to the right of the ladder. If he is trapped on the left, the probability is extremely high that he will die and reappear at the top of the screen. Killing should be avoided at all costs as the top is not where you want them to be.

The subsequent levels are completed with a similar pattern of dropping, trap-ping, grabbing the barrel and then getting the man to drop down further and out of the game.

The only deviation to this is on the top level (not the wire). Here, it is essential to dig on the right hand side,once the barrel has been picked up. If you dig on the left, guess who gets to the top first. Hint: it won't be you.

Finally, watch that no men are trapped down a level with barrels. This particular indiscretion on your part will be virtually impossible to rectify. Until next month, keep running.

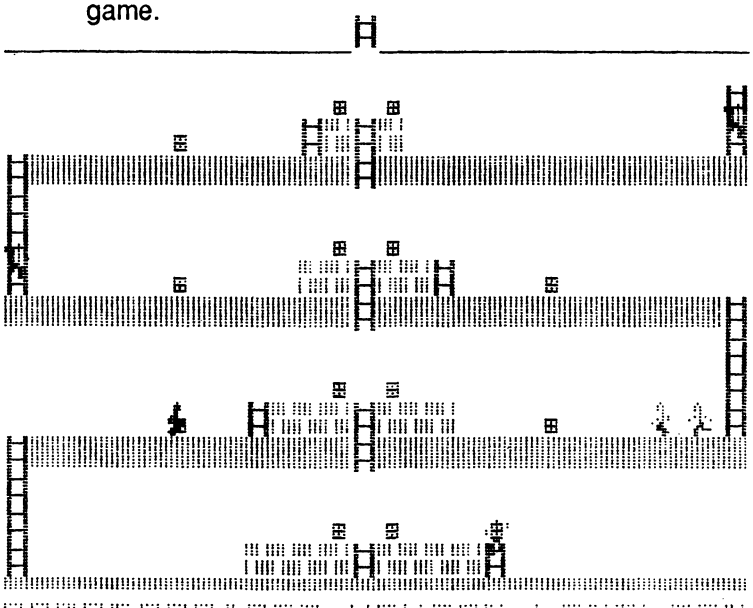
Jumpman

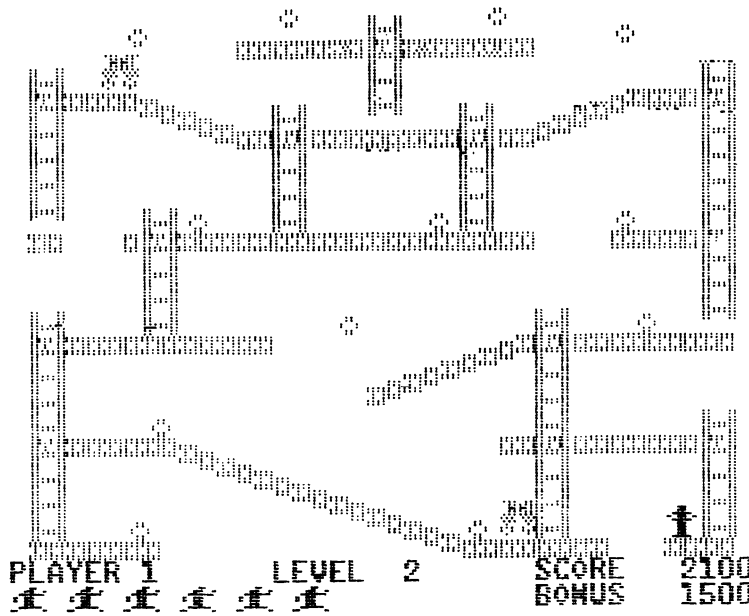
Continuing the Jumpman saga. If you have started out and, following our hints in the last issue, got past screen 1, you are now ready for the big time.

Heads down and look in for Screens 2,3 and 4.

Screen 2.Robots 1. The trick here is to follow the pattern without any hesitation whatsoever. Hesitate and you are lost. The tricky jump is definitely the first one marked B. This is the one that fangs all beginners who sit, tremulous at the start awaiting their doom. You have to carefully navigate between the Scylla of waiting too long before you make your jump and the Charybdis of leaving it too late and getting nutted. Practice makes perfect. Do not worry about being shot at - there are no bullets. The only enemies are the robots.

There is one robot at the top who starts to descend in a threatening manner as you start to ascend the right hand side. Ignore him.He is more a visual than a real threat. Although you can manage the left hand side of the climb the right hand side seems easier. This may be related to the way in which our brains operate - or it maybe built in to the





program. The left hand side climb gives you an extra hundred bonus points but to earn them you need to make a suicide leap right at the end.

Perhaps it is better to play safe and stick to the right.

Screen 3. Bombs Away. Try and look upon this screen as a train ing ground for the hard times that lie ahead. Your imitations of Lord Greystoke, as you leap for the ropes, will help you survive the later frames.

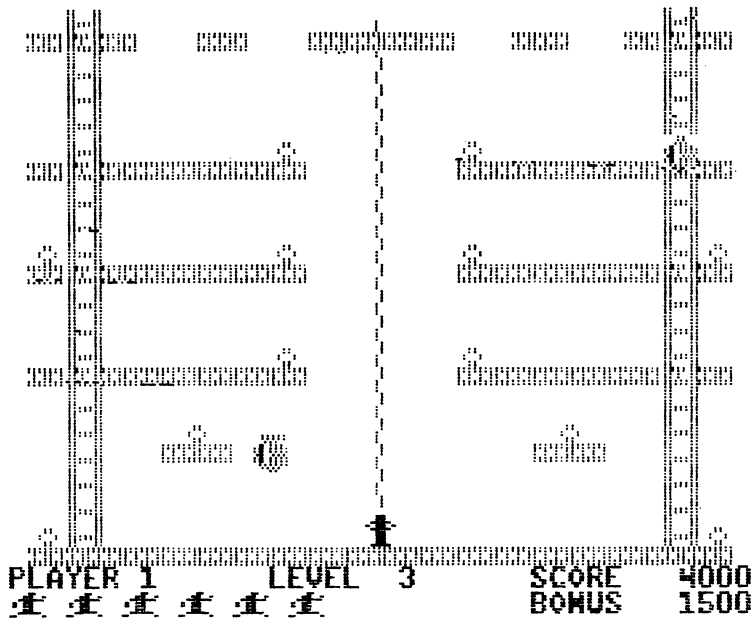
The bombs on the left side start eroding your platform (known as the Robert Hawke Syndrome among serious players). This can force you to the top of the screen where it is very easy to get zapped. So get to the centre as fast as possible and do your imitation of Tarzan down that centre rope.

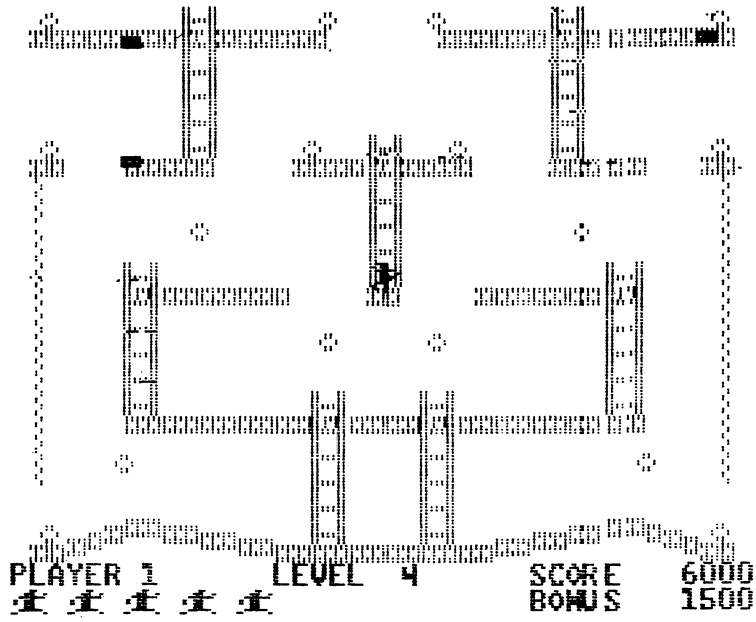
Note it is a one-way rope and you can only descend. If you miss a level you have to move to the side and clamber up again or finish your descent grabbing as many levels as you can and then do a fast circuit to cover those levels you missed.

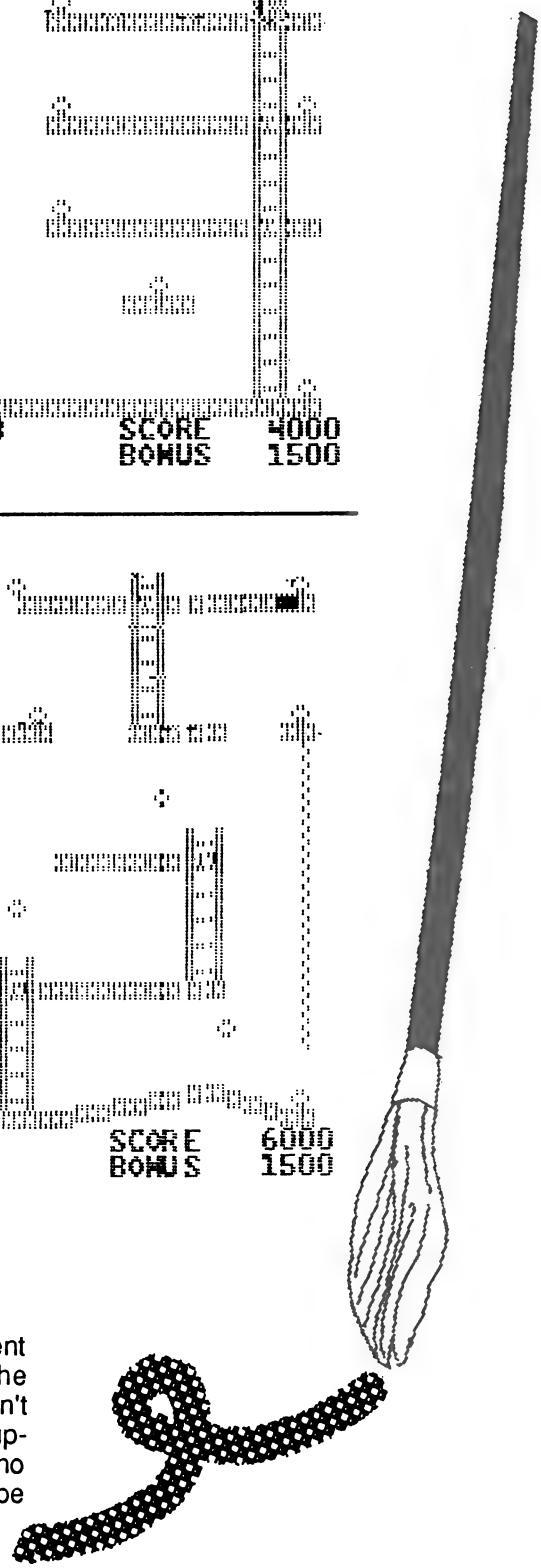
On any level except the top you can normally elude the bombs. So it is imperative that you keep your time on the top level to the absolute minimum. Regular points are 1200 with up to 800 bonus points available.

Level 4. Jumping Blocks. This frame has blocks instead of bullets. If one hits you it makes you jump like a St Kilda forward - normally straight up but fre-quently at a tangent. Avoid all blocks if possible.But if you are going to be zapped by a block try and do it so that you will land on solid ground - keep away from the edges of the platforms.Blocks become lethal if they get you while you are climbing the ropes at the sides. Try and minimise the time spent on the ropes which is the time of maximum danger.

One really tricky leap is C at the top of the screen. Take a running leap at it other-wise you will miss. As long as Jumpman can grab the platform, even with his fingernails, he can claw his way to safety - but help him with a good run and a last minute button depression. There is a nasty moment as well with the next-to-last, the penultimate block at F. If you don't get it right you will crash into the up-rope and be deaded. Unfair, but who ever said Jumpman was meant to be fair?







Book reviews

by Gareth Powell



Sometimes I am very proud of being a book publisher. Other times I am bitterly ashamed. The shame comes from the get-rich-quick attitude of publishers who leapt upon the computer band wagon as it started to roll and produced a series of books which were such utter, unmitigated rubbish that it makes my blood boil to think about them.

That scene, thank Heaven, is almost now all over and most of the books about computers that we see being published are less than totally dreadful. But there are still some horrors out there left over from that early way of greed and you would be well advised to check the original production date of any computer book before you buy to see whether it is a recycled, outdated piece of old cobblers or a title fresh off the press with worthwhile ideas and stylish writing.

Such a book is the **Whole Earth Software Catalog** which has been available in good booksellers since just about Christmas time. We've been a little dilatory in reviewing it, simply because it has become our favourite bedtime reading and this has kept us away from the task in hand - reviewing the book.

Some history first. Stewart Brand published the first **Whole Earth Catalog** in 1974. Please follow very closely here because it gets a bit tricky.That book was a sequel to **The Last Whole Earth Catalog** which he had published in 1971. Both of these titles were immense successes.The idea, like all good publishing ideas, was extremely simple.To produce a catalog of the best goods available in what you might term your actual alternative life style.The books made very serious up-front, whip-out money which Brand distributed to worthy causes.

It is important to know that, apart from being an early alternative life-styler Brand is also a hacker, in the honourable sense of that term, of some considerable fame.

An editor at Doubleday, possibly America's largest publishing house, thought of the bright idea of combining the two talents of Stewart Brand. The result is 'The Whole Earth Software Catalog' which may very possibly be the best book on computers ever published.

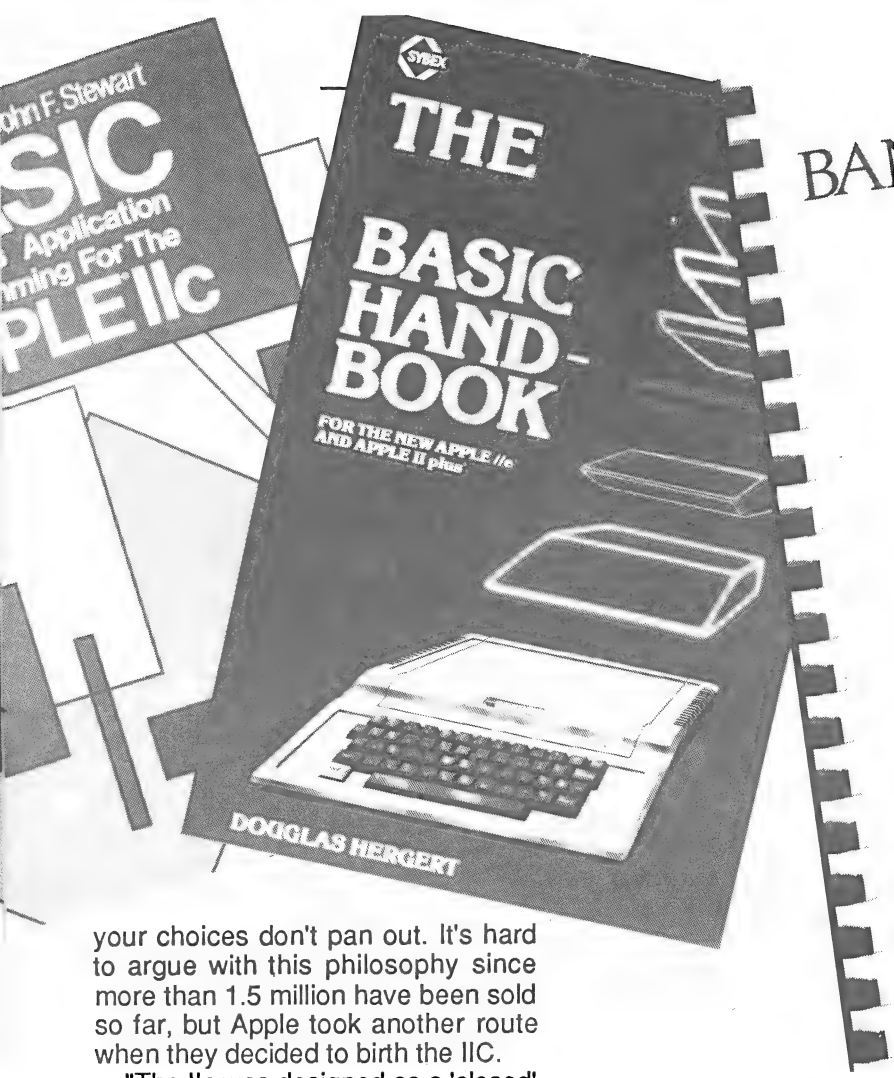
To get it together, Brand assembled a formidable team all over the United States who were connected together by modems running at 1200 baud. To set up such an operation is not cheap and Brand asked for, and got, an advance of over half a million dollars which, in the end, earned him an income from royalties of $808,790 which was disbursed among the contributors and to a foundation. Steve Brand is plainly not a member of the acquisitive society.

The resulting book is 208 pages long and is available in paperback from Corgi for $19.95, which is how they spell $20 and hope you won't notice.

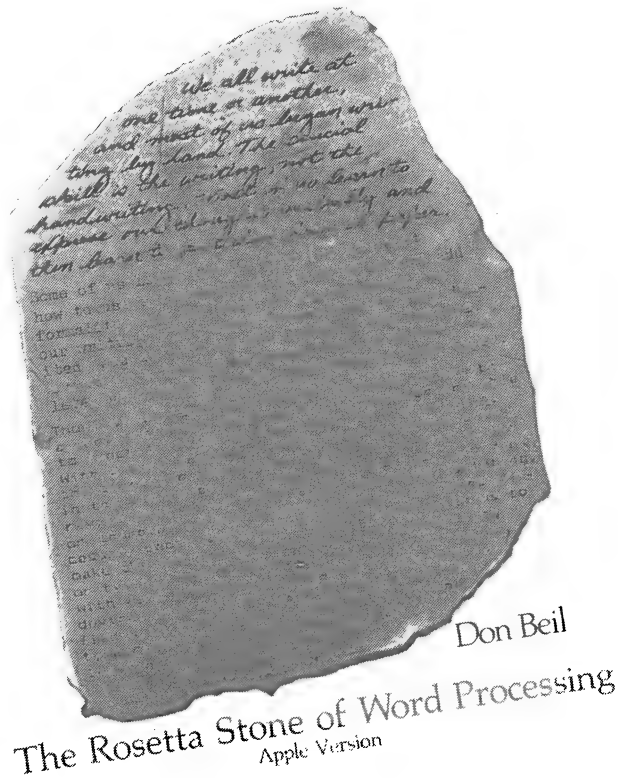
It probably would be worth serialising the whole book but just to give you a taste this is what is said about Apple :

"The Apple IIe and IIc are direct-line descendants from the original that Wozniak and Jobs designed in a garage. Seven years later, the same modest processor is included, and care had been taken with operating system changes so buyers continue to have access to tens of thousands of programs written during the long Apple II dynasty. No other computer can make that statement.

"The basic IIe, like its predecessors, is a starter kit, hence more 'open'. You decide about more memory, more CP/M compatibility, a clock/calendar to time things, what disk drives to attach,and what kind of monitor. This means self-education, comparison shopping and sometimes acute disappointment if



The BANK STREET WRITER Book



your choices don't pan out. It's hard to argue with this philosophy since more than 1.5 million have been sold so far, but Apple took another route when they decided to birth the IIC.

"The IIc was designed as a 'closed' system, with a built-in disk drive, all boards inside and the case sealed shut. You invalidate your warranty if yopu open the IIc and muck about its internals."

The whole book is written in that style and covers almost everything you want to know. Not that it is perfect. Not by a long chalk.

In discussing magazines there is a fairly nasty swipe at "Byte" which is not deserved and , even worse, there was a totally gratuitous suggestion that Jerry Pournelle ran his column for the benefit of his friends and relatives. Which is arrant and libellous rubbish. However, Stewart Brand met up with Jerry Pournelle at the recent hackers's conference in California and, on hearing the complaint, immediately wrote a letter of apology and said that a correction would be made in the next issue. So you can take it that although there are mistakes, they are honest mistakes.

There is a lot of the book that I don't agree with - but only in subjective areas. The one thing I am sure of is that this is the sort of title that restores my faith in book publishing.

When the Macintosh was first released there was a plethora of books, many of them written before the machine in its final form had reached the market, several of them contained less information than the standard handbook. None contained more. They showed the unacceptable face of publishing with all its spots and ugliness.

Now, to redress the balance, comes **MacPaint** by Susan Schmieman published by Brady in the United States and distributed by Prentice Hall in Australia. Price is $25.50 and the book is worth every cent. Until I read it I just didn't realise what you could do with the Mac if you really tried. The copy is clear and concise, the illustrations all apposite.

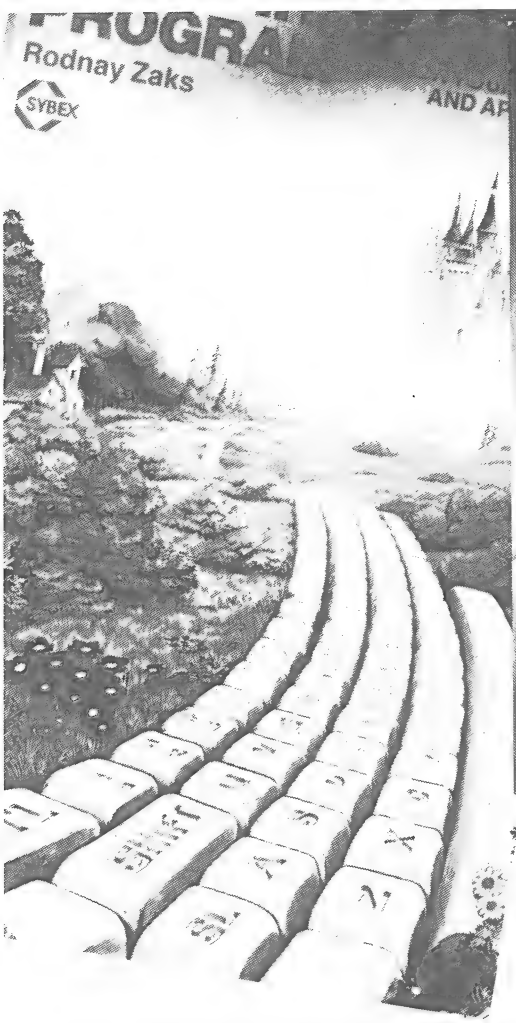
This is not a book that was slammed together in a hurry to catch a early market and make a quick buck. This is a book where the author has truly bothered to try and impart the knowledge and information which is in her brain, across to yours. Unreserved recommendation is the phrase you are looking for.

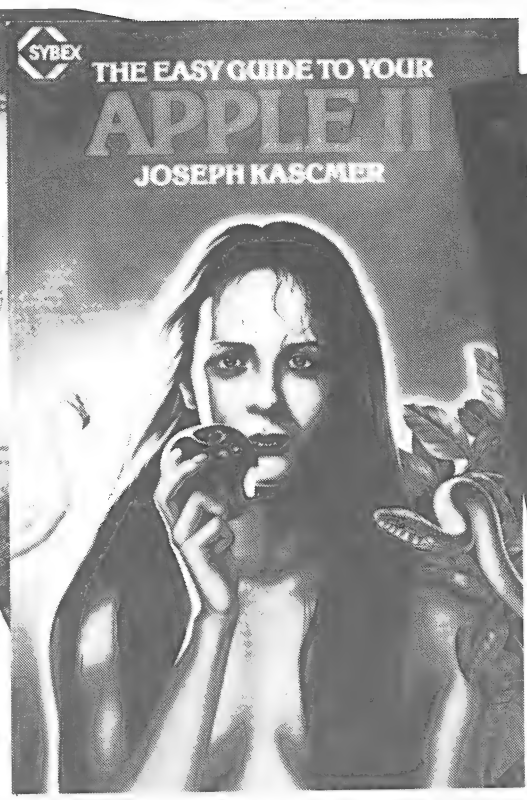
I probably hate Wordstar more than any other person in the world. I consider it archaic, clumsy, unfriendly and obtuse. The editor of this magazine loves it, which is a strange and wondrous thing. But then he likes CP/M as well, so there is little hope for him.

In my efforts to find a word processing program that would appeal to his low tastes I even ventured to try **Bank Street Writer** which had received tremendous plaudits in the United States. In truth, I found it too simple, too unsophisticated for my needs but it is easy to see why it was lapped up by schools throughout the world. In case you are wondering, Bank Street is a school where the program was originally tested.

Great if you want to zap out the occasional letter. Less than great if you have complicated word processing needs.

Now from publishers Reston in the United States comes **The Bank Street Writer Book** by Don Beil and distributed here by Prentice-Hall at an astounding $31.50. If you think







the price is presumptuous - which I do - then grab the subsidiary title - "The Rosetta Stone of Word Processing".I was so fascinated by this claim that I carefully read the book through to see on what basis the author was claiming that a software program could be compared to one of the keys that unlocked the mysteries of the ancient world.

The reason did not appear in the index.

Nor yet in the introduction.

And no, it appeared not in the text.

Nor yet in the publisher's blurb.

My guess is that some smart Alec was trying to justify the truly horrendous price and thought that by sticking in a bit of spurious culture he would fool the masses.

This is not a bad book. It is well written although the author seems to have left his sense of humour at home. But it tells you nothing startling that you cannot garner from the instruction book which Broderbund, who wrote the program, provide.

I certainly do not consider this book a rip-off and, I suppose, I could just make a case out for it for supplying to teachers.Just.

Rather more my style is **Basic Business Application Programming for the Apple IIc**. Again the distributors are Prentice-Hall with the price a reasonable $27.50. I am not quite sure why the IIc deserves a book of its own as I would have made the prsumption that any program for the IIe would have worked perfectly well on the IIc. But perhaps I am wrong. What this book definitely does require is a disk with all the programs already built-in. There is no mention of it in the book or in the publicity so perhaps it doesn't exist. If so, it is a sad oversight that should be remedied.

Dilithium Press have always specialised in computer books and most of their output has been pretty fair with more than the occasional flash of brilliance.

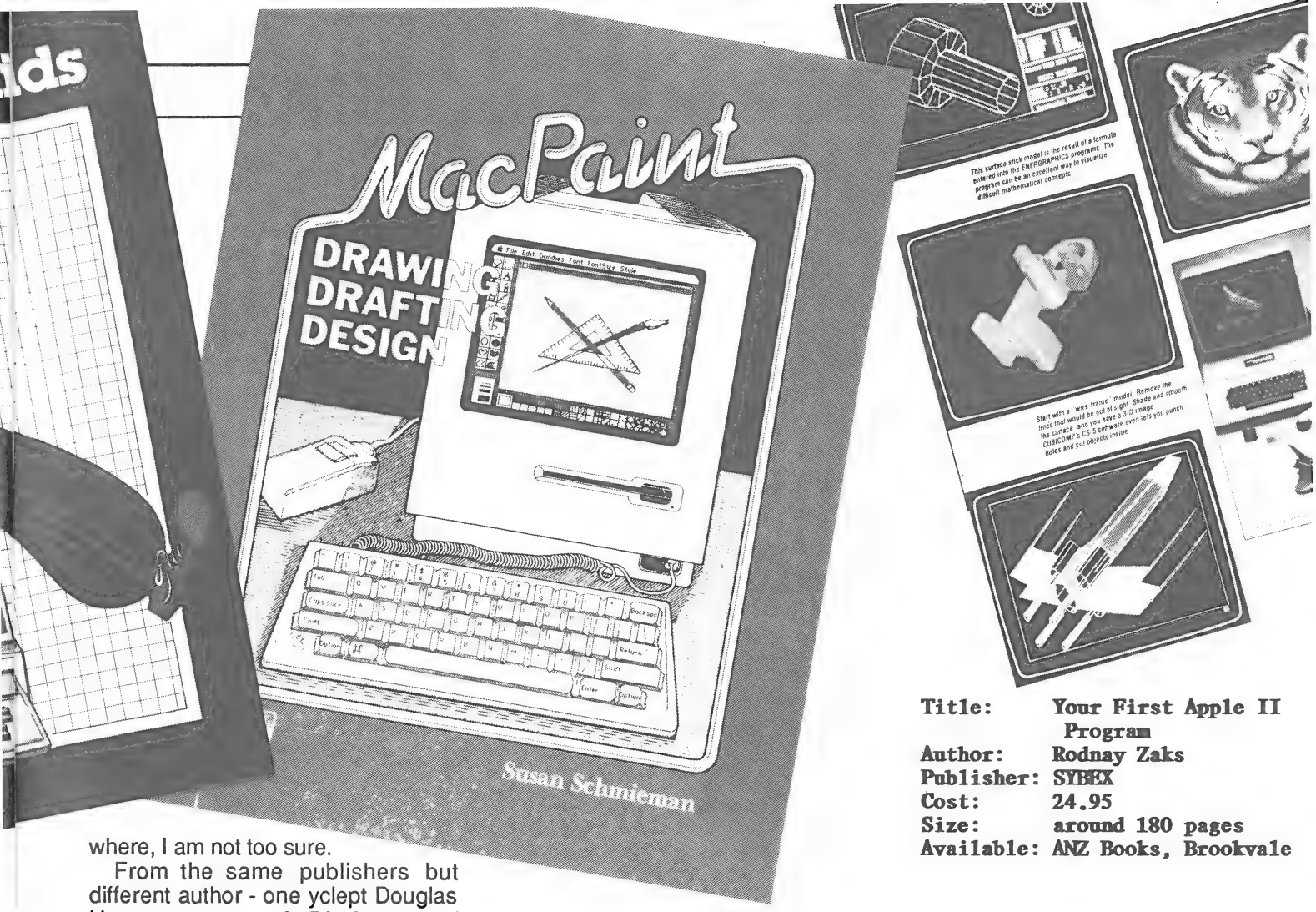
However, I can't follow the logic of producing a book called **An Apple for Kids** with lots of jolly drawings of laughing clowns closely followed by how to cope with an ?OUT OF DATA message. If kids are going to learn and love the Apple surely you should start the little ankle biters on Logo so that they are not frightened away. I may, indeed, be very wrong but I have often thought that Basic puts more people off than it encourages. OK, I'll go so far as to say that if you want to teach children Basic this is the book that you should use.

That's the good news. Now for the rest. First we have **The Easy Guide to your Apple II** by Joseph Kascmer which tells you nothing that the handbooks don't tell you - and does it with considerably less style. This book was first published in 1983 and shows its age. The book is written at the idiot level without the redeeming feature of humour. Sample sentence:

"With the cover removed, you can look down at what resembles a town of miniature black buildings seen from the air. This is the computer's circuitry."

Wow. And likewise whoopee. A load of old cobblers which has meant that several more trees have given their life in vain.

That last book came from Sybex. So does **Your First Apple II Program** by Rodnay Zaks. This is a much better title but then the author has been hard at it since the first Apple. At something under $20 the book is no bargain and I can think of easier ways of learning how to write my first program. As in sitting down and doing it. But the book is far from a rip off and no doubt there is a market for it somewhere. Quite



where, I am not too sure.

From the same publishers but different author - one yclept Douglas Hergert - comes **A Dictionary of Basic Instructions** which is supposed to help you on your merry way as you write a program that will solve the mysteries of the Universe. I found the book difficult to read and comprehend and I was less than impressed by it as a reference guide.

In law, there is an useful Latin phrase, "cui bono", which is roughly "who benefits?"

Not, I think, in this case the book buying public.

Just the publishers who have put onto the bookshelves these titles which have no real reason for existence.

The difference between 'The Whole Earth Software Catalog' and 'The Apple II Basic Handbook' is more a question of philosophy than anything else. One has been published to fulfill a genuine and perceived need. And the publication has been executed brilliantly.

The other is, in truth, a mediocre attempt to fulfill a need which is already catered for by hundreds of other titles. A question of philosophy.

And possibly ethics as well.

Title: MacPaint – Drawing, Drafting, Design
Author: Susan Schmieman
Publisher: Prentice–Hall Aust.
Cost: 28.50
Size: around 190 pages
Available: Beagle CS

Title: BASIC Business Application Prog. for IIc.
Author: A Parker β J Stewart
Publisher: Prentice–Hall Aust.
Cost: 29.95
Size: around 300 pages
Available: Beagle CS

Title: The Easy Guide to Your Apple II
Author: Joseph Kascmer
Publisher: SYBEX
Cost: 18.95
Size: around 140 pages
Available: ANZ Books, Brookvale

Title: Your First Apple II Program
Author: Rodnay Zaks
Publisher: SYBEX
Cost: 24.95
Size: around 180 pages
Available: ANZ Books, Brookvale

Title: The Apple II Basic Handbook
Author: Douglas Hergert
Publisher: SYBEX
Cost: 29.95
Size: around 250 pages
Available: ANZ Books, Brookvale

Title: An Apple for Kids
Author: Sharon Boren
Publisher: Dilithium Press
Cost: 22.95
Size: around 230 pages
Available: ANZ Books, Brookvale

Title: Whole Earth Software Catalog
Publisher: Corgi Bantam
Cost: 19.95
Available: Beagle CS

Title: The Bank Street Writer Book
Author: Don Beil
Publisher: Prentice–Hall Aust.
Cost: 35.95
Size: around 250 pages
Available: Beagle CS

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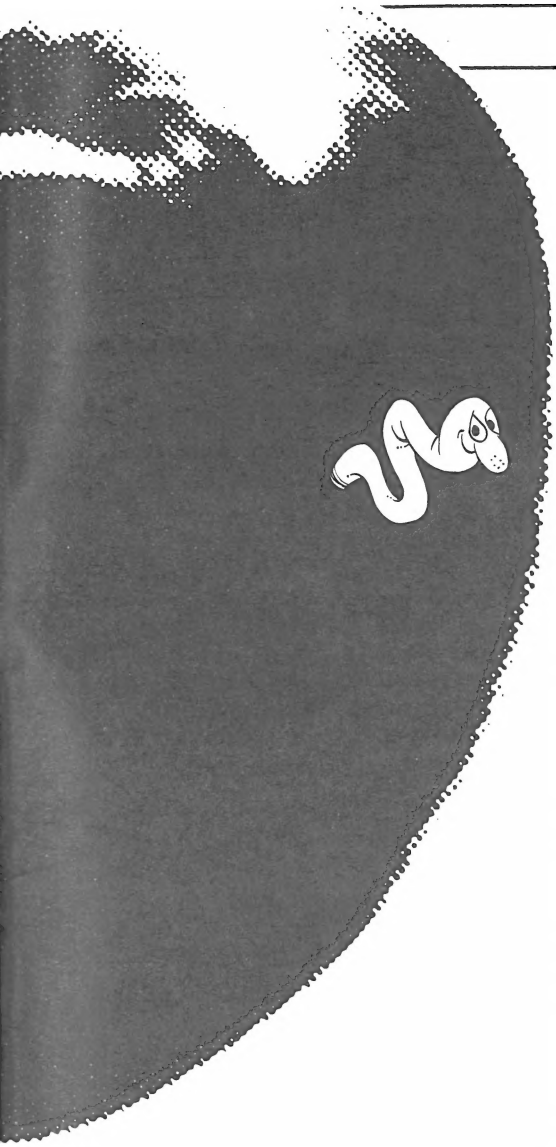
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Worm in the Apple

This issue of the Australian Apple Review coincides with the launch of the Hongkong Apple Review. Constant readers will be in no way surprised to find that there is, indeed, an Orientral Worm in the Apple who is a very close relation of the Australian Worm in the Apple. Indeed, in a dim light with the light behind them you might almost take them for twins. To coincide with the Hongkong launch we are running the text of the Oriental Worm in the Apple which we have trans-lated from the original Chinese. Next month our dinkie-di, Aussie Worm will be back in the chair again.

Morality, commercial morality, was ever a strange thing. Fake Apples are illegal. This has been proven in court after court around the world. Companies that tried to cash in the the fame of the real Apple have found themselves in court and sometimes, like Franklin, in bankruptcy.

But here in Hongkong this poor Worm hears that naughty members of the Police Force have been using fake Apples. At police headquarters in Central. Now it is certainly not for this Worm to stir up trouble with this upright, stalwart body of officers in blue.

Who knows? One day I may do a naughty deed and need all the friends I can get.

But I still find it strange that the Commercial Crimes Division, housed in the same building, should be aware of these illegal Apples and not do anything about it. My old friend, Caretaker Worm, says we are not talking about one or two fake Apples here. There were by his count - although mathematics were never his strong point - over sixty fake Apples in use by the Hongkong Police Force.

Now this I simply refuse to believe.

They will be saying that the Hongkong Telephone company uses fake Apples and stolen programs next.

There is a man who writes for "Byte" magazine in the United States called Jerry Pournelle. This humble Worm thinks that he is the best writer on personal computers in the world. Not that there are many who are really good.

After Pournelle and Eric Sandberg Diment of the "New York Times" there is no one.

I shall not voice my opinion of the writings of the editor and publisher of this journal as he is a man quick to wrath and slow to forgive.

Pournelle got so fed up with unfulfilled promises from hardware and software manufacturers that he invented a phrase to cover all their false claims of delivery dates, "Real Soon Now". Sums it up perfectly.

We now have that problem with the Macintosh version of "Lotus 1-2-3" called, for reasons which escape the informed student of the English language, "Jazz". Delays have been announced and the glitterati of Gilmans in Hong Kong - the official Apple importers who are led by the extremely toothsome Deborah O'Hara - have not a copy between them.

I have never been a lover of "Lotus 1-2-3" as, in this humble Worm's opinion, the word processing part of this tripartite program is cumbersome and less than felicitous in use. And Worms do not have much use for spreadsheets.

It will amaze all readers to learn this Worm has been in possession of his

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very own copy of "Jazz" for some months. Not that this Worm is more program-worthy than Gilman's glitterati - especially the aforementioned young and lovely Deborah O'Hara. Perish the thought.

Just more cunning.

And this Worm has run it on the publisher's Fat Mac when the publisher wasn't looking.

And this Worm can reveal to a waiting world why Lotus have not released "Jazz" on the due date but are sticking to Real Soon Now. Because it is full of bugs in both the spreadsheet and the database.

The word processing section and the graphics seem to work OK but you can get into terrible muddles trying to transfer information to the database and vice versa.

The reason for this is not difficult for even a Worm to comprehend. When Apple made the Macintosh they built into the Read Only Memory a range of programmer's tools which allow full use of the pull down screens, the icons, the mouse and other delights.

But they left the way that these tools were implemented, the way they were integrated into the program, up to the individual programmer. It is not that programming the Macintosh to pick up and use these tools is difficult - although in this Worm's opinion it is far from easy - it is simply that you need to think in a different way. Problems on the Mac cannot be solved using the straight line logic of the traditional programmer.

This Worm has the theory that the programmers at Lotus have been schooled in the straitjacket of the MS-DOS operating system, which is as traditional as the Grenadier Guards.

If anyone wishes to enquire how such straitjacketed programmers came up with the concept of Lotus 1-2-3, the simple answer is they didn't in the sense that you mean. They simply vastly improved on a concept called MBA, widening its scope and putting it in machine language to speed it up by a factor of ten.

This Worm clearly understands you cannot transport programs for other machines over to the Macintosh and expect them to run first time. Writing for the Macintosh needs a radical shift of gears in the way that a programmer thinks, the way a programmer approaches and solves a problem.

There is no doubt in this Worm's mind that Lotus will get it right - with the amount of money they have floating around they can afford to bring in a team of lateral thinking programmers to bail them out of their problems.

But this Worm thinks that they will be too late.

This Worm has seen "The Switcher" in action. Indeed, wretched Worm that he is, he has once again got hold of a copy before Gilman's - including the aforementioned young and lovely Deborah O'Hara.

Tut tut and likewise shame.

The Switcher is a program that allows you to combine any four programs on the Macintosh to provide a custom-built Lotus 1-2-3-4. And this has very few bugs in it all. And should be launched at about the same time as this magazine.

Lotus say Jazz will be a month later.

Or Real Soon Now.



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— *"superbly easy to use, quick, convenient." PCAL Report Dec 83*
— *"in many ways better than a dedicated word processor." The Australian 31/3/84*
— *"if word processing is an art, Zardax is a Rembrandt." In-Cider March 83*
— *"highly recommended." Softalk Jan 84*
— *"Zardax wins praise for being well-nigh bulletproof." Your Computer April 84*

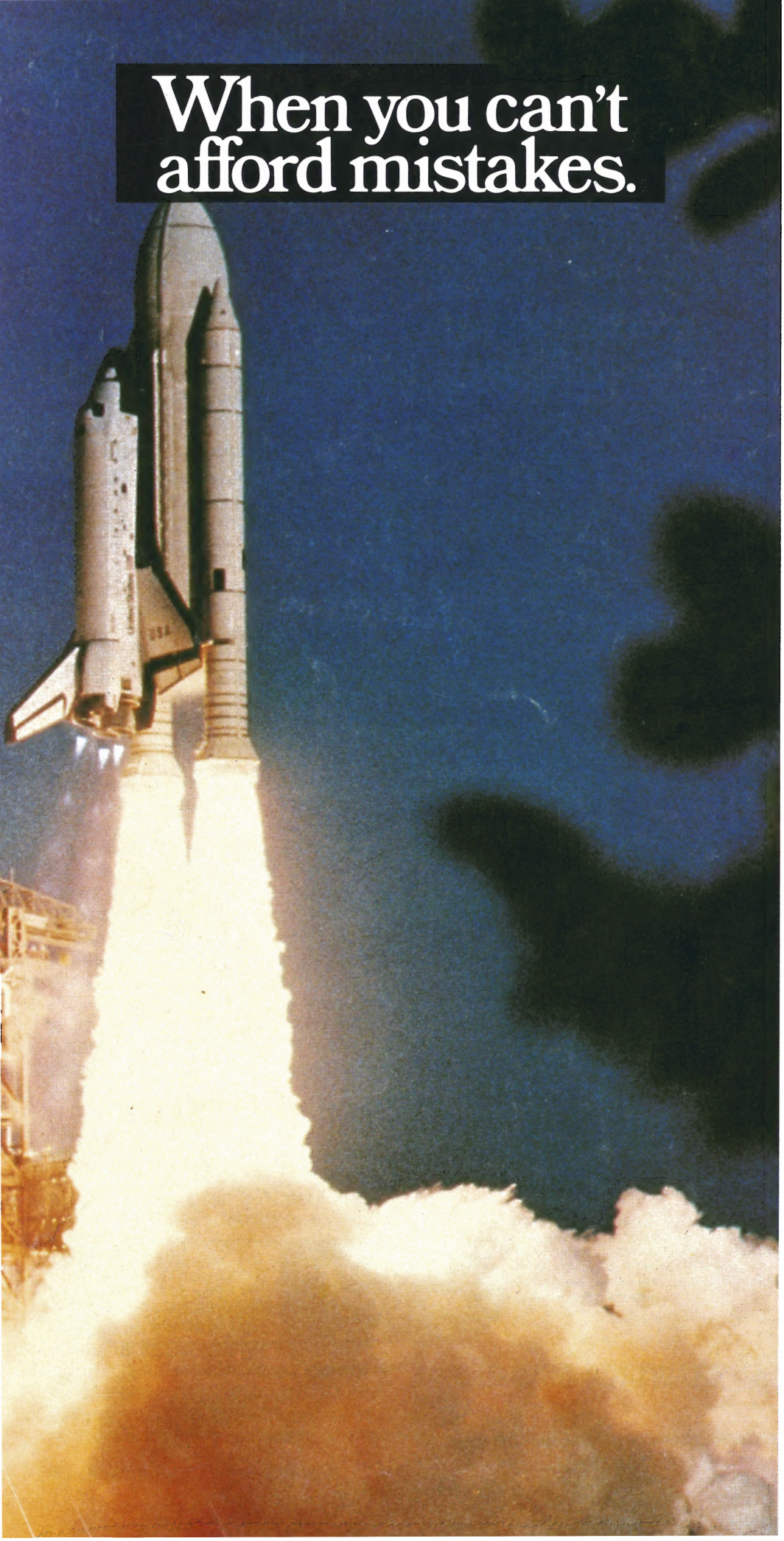
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